Amateur Radio

VOL. 50, No. 6 JUNE 1982
Registered by Australia Post — Publication No. VBH 0569

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

★ AUDIO READ-OUT FOR THE IC701
★ STAGGERED STACKING
★ HEARD ISLAND
★ VE TO VK — VIA WHEELCHAIR

☆ COMPETITON:
WIN THIS KEYER

Published monthly as its official journal by the Wireless Institute of Australia, founded 1910.

ISSN 0002 - 6859.

VOL. 50, No. 6
JUNE 1982

Registered Office:
3/105 Hawthorn Road,
Caulfield North 3161.
Tel. (03) 528 5962

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The Editor,
PO Box 150, Toorak, Vic. 3142

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Production: BETKEN PRODUCTIONS
5 Maxfield Avenue, Moorooibark, 3138

Typesetting: MUELLER GRAPHICS PTY. LTD.
1a Levanswell Road, Moorabbin, 3189
Tel.: (03) 553 0292

Printers: WAVERLEY OFFSET PUBLISHING GROUP
Geddes Street, Mulgrave 3170
Tel.: (03) 560 5111

amateur radio

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DEPARTMENTS

FRONT COVER

Peter Wolfenden VK3KAU (right) WIA Federal President, welcoming NZART President "Jumbo" Godfrey ZL1HV (left) to the 1982 Federal Convention, watched by David Wardlaw VK3ADW and Jamie Pye ZL2NN.

Photo by Dave Shaw VK3DHF

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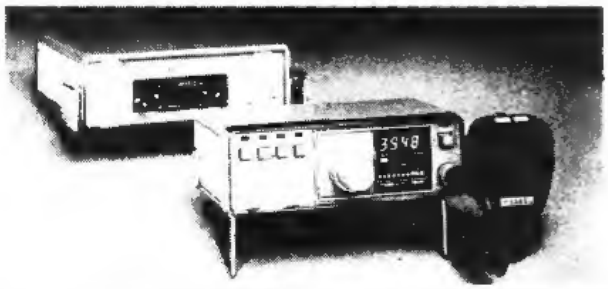

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Frequency coverage:	144.00—147.99 MHz 144.00—145.99 MHz	430—439.975 MHz 440—449.975 MHz
Synthesizer steps:	10 or 12.5 kHz	25 kHz
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Second IF:	455 kHz	455 kHz
Sensitivity:	0.32 uV for 20 dB quieting	0.5 uV for 20 dB quieting
Selectivity:	±6 kHz (—6 dB) ±12 kHz (—60 dB)	±12 kHz (—6 dB) ±24 kHz (—60 dB)
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W0602

WIA NEWS

FEDERAL CONVENTION NEWS

These are a few extracts from the proceedings of the 1982 Federal Convention held in Melbourne, 1st, 2nd and 3rd May, 1982, as taken from the report of the editorial team consisting of Ron Henderson VK1RH, the ACT Div. Federal Councillor, and Wally Watkins VK2DEW, the NSW Div. Alternate Councillor:—

- *Federal Council recognises that the subject of increases in Novice licence privileges has been regularly raised but the status quo has been and is maintained, and recommended that local contacts should be made where practical on the 10 metre band so as to relieve any congestion on the 80 metre band;*
- *A motion seeking an amendment to the Handbook to permit repeaters to identify as beacons was lost;*
- *The use of the 10 MHz band for WIA broadcasts is not to be encouraged;*
- *Efforts are to be made to promote co-ordination between third party traffic networks (which are to be supported) and authorised amateur emergency networks, and that third party traffic agreements with other countries must continue to be pursued;*
- *The Executive is to investigate the formulation of standards relating to the transmission of ASCII;*
- *Rules for the affiliation of Australia-wide special interest organisations to the Federal body were adopted;*
- *DOC is to be requested to permit the cross-linking of repeaters in general, but tone-burst access to repeaters was not passed;*
- *Forward planning proposals were adopted for implementation, including public relations for WCY83;*
- *The new WIA Book, Volume 1, was launched by the Editor;*
- *Continuing WIA pressures to exempt amateurs from the sticker or label proposals to identify the legality of possession of transmitting equipment (vide trial run in VK7) proved inconclusive in discussions with DOC guests at the Convention dinner.*
- *Closer relations with other IARU societies, but particularly NZART, were enlarged upon also in discussions with NZART President, Jumbo Godfrey ZL1HV, one of the two NZART guests throughout the Convention.*

Further details are to be published in July AR.

P. WOLFENDEN VK3KAU,
Federal President. ■

QSP

DESIGN A QSL CARD
FOR JAMBOREE-ON-THE-AIR.

DETAILS NEXT MONTH.

An Audio Read-Out for the ICOM IC701 Transceiver

P. J. Hall VK7PH
Physics Department, University of Tasmania

A simple talking readout for the IC701 is described. The unit can be interfaced to the transceiver with no interference to the function or performance of either the transmitter or receiver. The normal visual readout remains unaffected.

The concept of an audio readout for digital equipment is not new and has been described by at least two other writers in connection with amateur equipment (Ref. 1, 2) and one specifically relating to the IC701 (Ref. 3). The present unit is very simple and uses readily available parts. The heart of the readout is a Telesensory Systems S2A speech synthesis board available locally (Ref.4). The board produces a distinctly synthesised voice but the output is completely intelligible. The synthesiser has a 24 word calculator vocabulary but in this application only the numbers 0 to 9 and "point" are spoken. The speed of the speech is adjustable. The S2A is supplied with a well written technical description and the detailed working of the synthesiser will not be discussed.

THE CIRCUIT

The auxiliary circuitry needed to make a readout is concerned with initiating speech, sequentially presenting the S2A with the BCD digits to be spoken, low-pass filtering and amplifying the reconstructed digital output and terminating the speech. The synthesiser is a PMOS device and is easily interfaced to TTL by using a +5V and —10V power supply which needs to be in the readout unit. An audio amplifier power supply is also provided.

This design speaks kilohertz and tenths of kilohertz. For example, a display of 14250.6 is spoken as "two-five-oh-point-six". I have omitted the megahertz for three reasons. Firstly, the blind amateurs consulted never experienced any difficulty in placing the band switch in the correct position. Secondly, the megahertz decoding in the IC701 is not straightforward and extra readout circuitry is needed for spoken megahertz. Finally, extending the lines necessary to provide externally decoded spoken megahertz seemed to be inviting RF feedback problems.

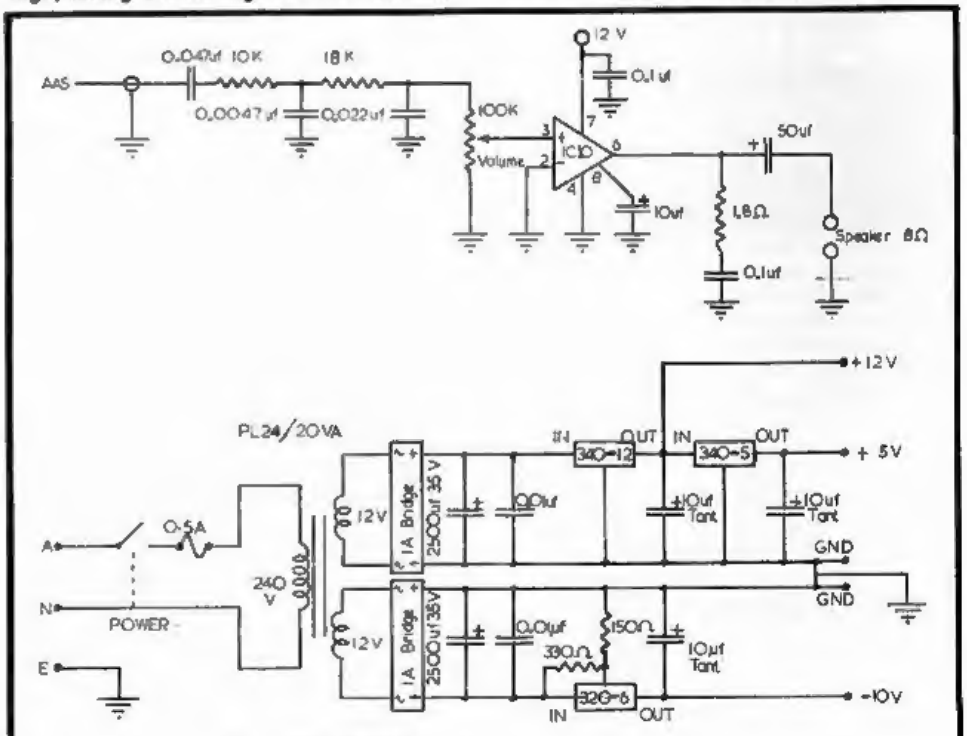
The readout is connected to the IC701 by a 20-conductor ribbon cable (4 BCD numbers, 2 earths, 2 spares). Five 8-way multiplexers (IC1-5) are used to provide a 5-bit speech code to the S2A speech inputs WP0-WP4. The digit code is normal binary and "point" is spoken by applying the address 13 (hex) to the module.

I used Fairchild 9312 multiplexers but the 74151 is an exact functional equivalent (the pin connections are different). A 74LS161, (IC6) is used as the multiplexer address counter. When BUSY is de-activated(meaning that the current word has been spoken) IC6 is incremented and the multiplexers stepped to the next digit to be spoken. IC6 state 0000 is a "rest" one and the I_0 inputs of IC1-5 are wired to give the "silence" code OD (hex) to the S2A. I_1 inputs give the "point" address.

HOW IT WORKS

The basic function of the unit is as follows. When the SPEAK momentary contact switch is closed the D flip-flop IC7 is set causing the S2A START line to go high. After a short time BUSY goes low causing the collector of TR1 to go high, taking START low and incrementing IC6. The falling edge of START begins the utterance of the word on WP0-WP4. When the utterance is complete BUSY goes high, taking START high and re-commencing the speech cycle. When the state 110(6) is detected by IC8a the multiplex counter is reset and the system is ready for another SPEAK command. In order to have spare gates in the prototype both NAND and NOR gates (IC8, IC9) packages were used. The spare gates are easily eliminated if desired.

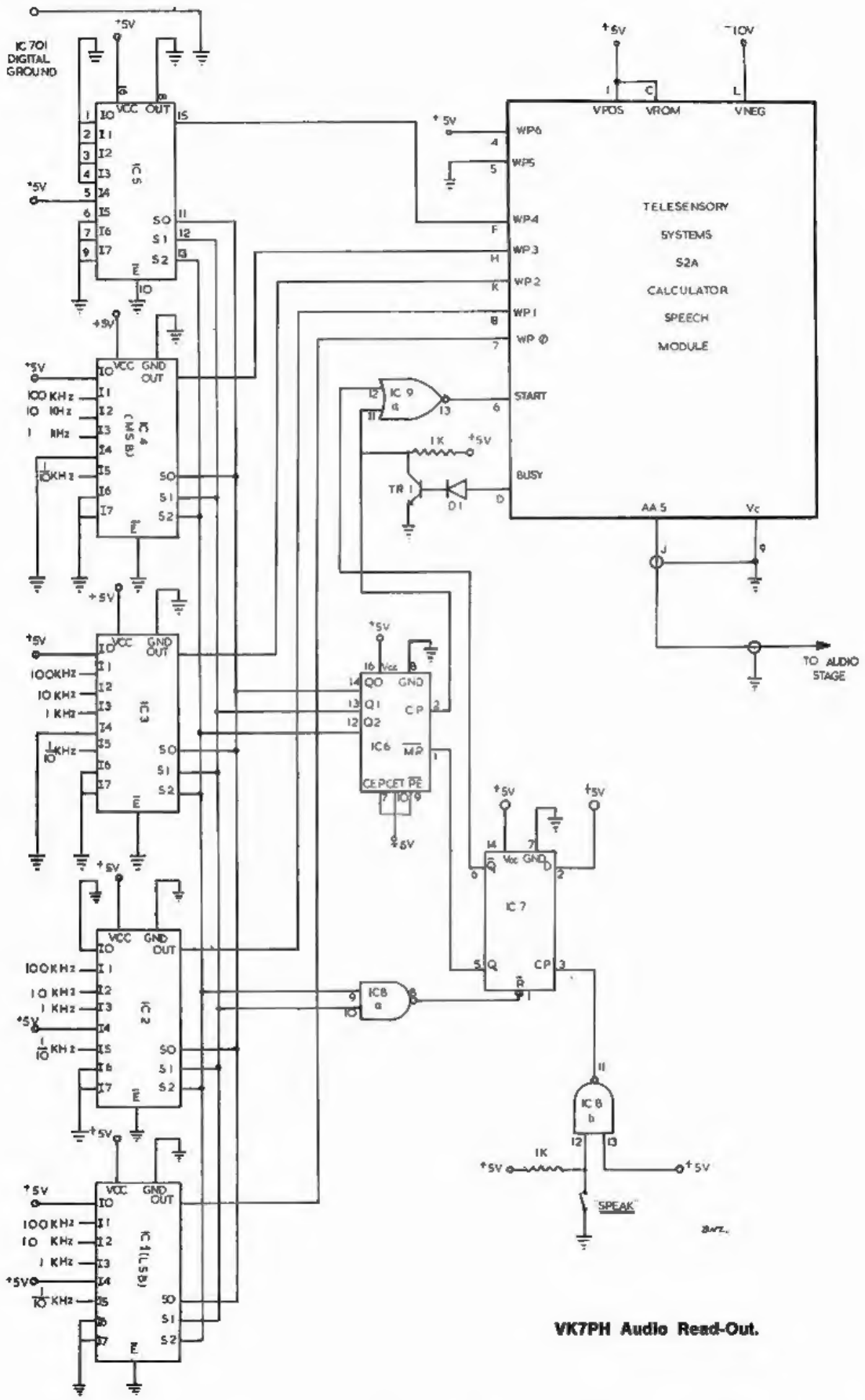
The low-pass filtered audio output is amplified in an LM380 stage and used to drive a 100 mm speaker. An effective baffle improves the speech quality. The cut-off frequency of the low-pass filter is not critical and can be changed to suit the speaker used. I have used the G3YFQ component values with good results. The S2A applications literature gives details of an optimum audio response. I do not recommend the use of active filter sections because indiscriminate design often



D1 IN914 or equiv.
TR1 2N2369 or similar
IC1-5 9312 or 74LS151 (9312 Pin Connections shown)
IC6 74LS161
IC7 74LS74
IC8 74LS00
IC9 74LS02
IC10 LM380 (Pin connections for 8 Pin DIL Version shown)

NOTE: All TTL ICs bypassed with 0.1 uF disc at chip.

Power Supply and Audio Amplifier.



VK7PH Audio Read-Out.

generates poor impulse responses.

INTERFACING

Interfacing to the transceiver readout is straightforward but dismantling and reassembling the IC701 requires care. See the IC701 circuit diagram for display driver pin connections. Check that the digit lines are connected in the correct order and with correct significance. I_1 is the hundredth of kilohertz digit, I_5 is the tenth of kilohertz digit. Digit MSBs connect to IC4, LSBs to IC1. Connect the two earth lines to earth at the driver ICs. The 20-conductor cable (600 mm long) may be brought out through one of the top ventilation slots, allowing the readout to sit on top of the IC701. A standard multi-pin connector can be used at the readout to allow easy disconnection.

With the readout housed in a metal box earthed via the mains and a short, heavy RF earth run between the IC701 ground lug no problems are evident on any band. The system has been checked with the transceiver running full power to antennas, running into a 400W linear amplifier and driving a 2 kW linear amplifier into an unshielded dummy load. Omission of the RF earth may lead to RF feedback, usually evident as FM on the transmitter output.

I thank my friends Doug Parish VK7AZ and Ian Nichols VK7ZZ for their unambiguous definition of the problem from the point of view of the visually impaired. Doug's transceiver was my first victim and he is happy to give on-air demonstrations of the readout (quaintly named "Henry").

REFERENCES

1. Ham Radio, June 1979.
2. 73 Magazine, April 1981.
3. G3YFQ, "Audio Display Unit for IC701", Publication details unavailable.
4. A.J. Distributors Pty. Ltd., P.O. Box 71, Prospect, S.A. 5082. Approx. $109 (to disabled) plus tax. ■

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Young boy explaining why he wasn't putting money in his piggy bank: "It turns kids into misers and parents into bank robbers."

THUMBNAIL SKETCHES

Peter Handley Brown VK4PJ
16 Bede Street, Belmoral, Qld. 4171

Sir Frank Sharpe

SIR FRANK V. SHARPE, CMG, OBE(Mil.), ED, ex 4AZ, 1925, VK4FV

A 1925 Queeensland Radio News article gives exceptional praise to Frank, who obtained the first licence to broadcast in Queensland and operated from the Trades Hall for the Radio Society of Queensland, but also carried out experiments from his Clayfield home from the early 1920s.

Frank's interests also included the Australian Military Forces and from joining in 1918 he became a Captain in Signals in 1928, and followed on in the service to become Lieutenant-Colonel in the early war years and Acting Colonel, I/Charge Administration, Queensland, for which he was awarded OBE(Mil.) and ED.

During WW2 Frank's radio equipment became dispersed and he later became deeply involved in pioneering helicopters in Australia, and subsequently in experimental fruit growing.

Frank took up amateur radio seriously a few years ago until failing health limited all activities.

For "outstanding services to the community" Frank was knighted in 1979. ■

Marcus Brims

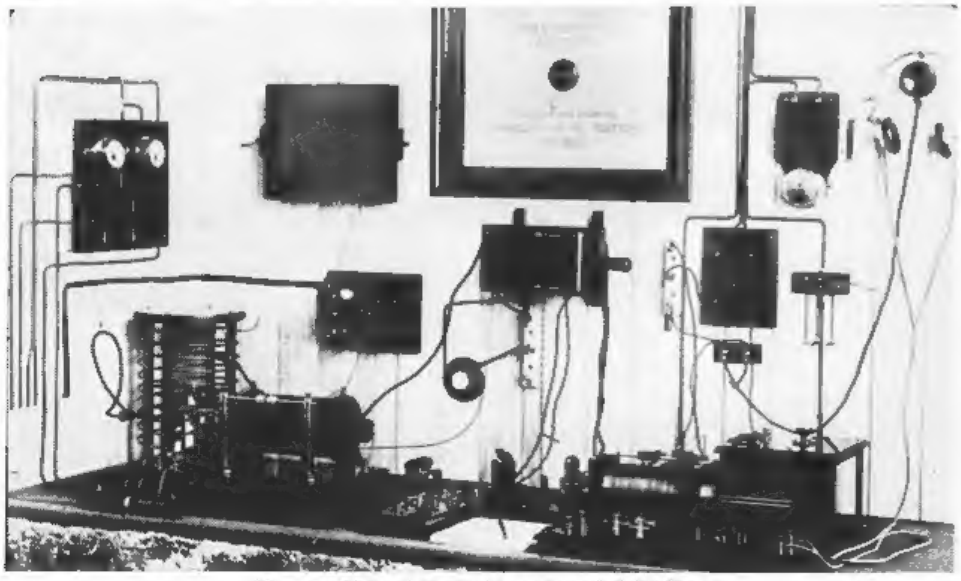
MARCUS BRIMS, XQA, licensed 1914

Marcus was born in Ingham in 1888.

After applying in July 1913 Marcus was granted a licence in February 1914 and is first on the list of that period. He was permitted to transmit on a wavelength of 160 metres with power of 72 watts, at Mareeba, and mentioned Andrew Couper of Mareeba, who had not yet been allocated a call sign, as a fellow experimenter. There were 10 Qld., call signs then. In 1914 Marcus, in accordance with war-time regulations, boxed up his equipment, and forwarded it to the PMG, and reduced his antennas to ground level.

The family operated a sawmilling business and the equipment was stored in four, what we would call cabinets, recovered after WW1, and one cabinet was opened up for display at a Gold Coast Hamfest in near perfect condition last year.

Marcus never returned to radio but instead built aeroplanes which carried Brisbane newspapers to the north for many years. Marcus retired recently from the very well known family ply and particle board business and enjoys relatively good health. ■



Marcus Brims' Early Experimental Station.

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IC2KL	Solid-State Linear Amplifier 1kW	$1729	$1399
IC451	70CM Transceiver AC/DC	$999	$769
IC730	HF Transceiver	$999	$749
DAIWA			
CN620A	"X" needle SWR/PWR Meter	$99	$79
KENWOOD			
BS5	Pan display for SM220-TS520	$75	$63
PS20	Power Supply for TS120V	$96	$81
SP40	Mobile Remote Speaker	$25	$22
TR2400	2M FM Handheld Transceiver (Model changed)	$380	$310
TR9000	2M SSB/FM Transceiver	$563	$454
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AF310	15W Audio Amplifier	$27	$13
AF340	40W Audio Amplifier	$39	$20
AF380	2W General Purpose Amplifiers	$15	$7
AT320	AC/DC Relay Amplifier	$47	$22
AT347	Electronic Roulette Kit	$62	$32
AT350	2Amp. Triac Light Controller	$15	$7
AT356	6Amp. AC Regulator	$31	$15
AT357	Touch Dimmer	$35	$17
AT365	3-Channel Light Show Kit	$74	$38

Make	Items	Normal Price	Stock-take Price
JOSTYKIT			
AT465	3-Channel Light Show 02	$76	$36
AT468	4-Channel Light Show	$85	$44
B606P	Box for AT468 Light Show	$31	$15
HF305	Converter 175-105MHz to 105MHz	$31	$15
HF310	FM Tuner	$55	$27
HF325	Quality FM Tuner	$86	$44
HF330	Stereo Decoder	$27	$13
HF385	VHF/UHF preamp	$34	$15
HF61	Medium Wave Receiver	$22	$11
JK01	General Purpose Amp. 0.5W	$22	$11
JK02	Microphone Amplifier	$20	$9
JK03	Sine Generator 20-2000Hz	$34	$18
JK07	2-Tone Decoder for RC-Contr.	$30	$16
JK08	Light Relay for 240VAC	$24	$12
JK09	Siren incl. Loudspeaker	$20	$10
NT300	Lab Power Supply, 2-30V	$126	$63
NT415	Lab Power Supply Kit	$149	$77
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Duncan is Customer Service Manager at Vicom's South Melbourne headquarters, where he not only deals with personal enquiries, but inspects equipment before despatch.

Kiyoshi as Service Manager - Amateur Radio, performs pre-delivery tests on all imported equipment to ensure that rigid factory specifications are maintained. Trained in Japan by Icom and Sanyo, Kiyoshi first gained his amateur licence in 1965.

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WC605

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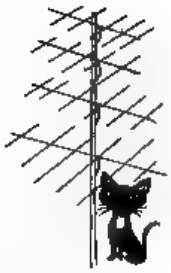
Staggered Stacking

G. J. McDonald VK2ZAB
59 Wideview Road, Berowra Heights, NSW 2082



ABSTRACT: Stacked yagis and similar antennas are usually fed in phase with the corresponding elements parallel and in a plane perpendicular to the axis of the individual arrays, Broadside Stacking, or with the corresponding elements collinear and all elements of the individual arrays in the same plane, Collinear Stacking.[1]

The author has never seen or heard of any departure from these rules being applied to an amateur antenna and it may be that we have forgotten that other arrangements are not only feasible but may be quite advantageous in some circumstances.

This article describes one such departure from the norm.

Following a change in QTH the author was faced with the need to reduce the substantial back and side lobes of a two metre antenna comprising four 6 element yagis stacked two alongside two.

The side lobes were expected to be reduced by decreasing the stacking distance but the back lobe was found to be inherent in the design of the individual yagis and overcoming this required a little more thought.

Experiments were carried out in an attempt to reduce the back lobe by altering the reflector spacing and by changing to trigonal reflectors. This proved to be a waste of time except to verify classic advice which pointed out that such methods would not work.[2]

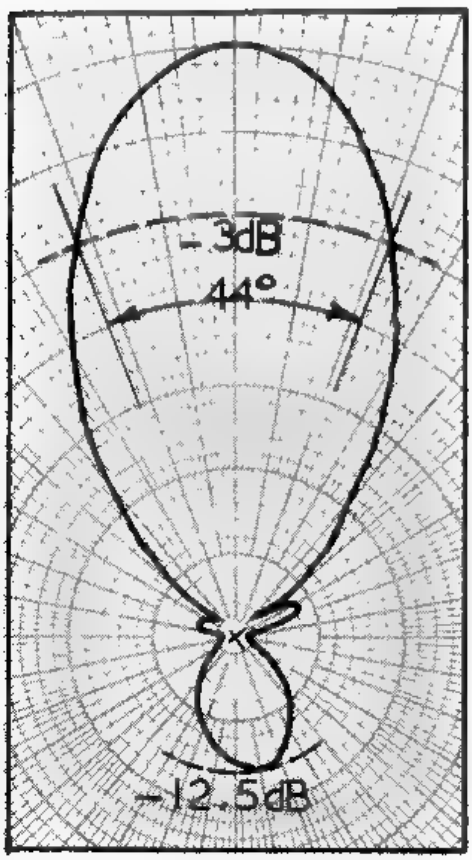


FIG. 1: E Plane Pattern 6 Element Yagi.

The prospect of scrapping four yagis and starting from scratch was not attractive particularly as, apart from the back lobe, the performance of the antennas was quite satisfactory. A polar plot of the response is shown in Fig. 1. The gain is just over 10 dBd.

Fortunately antenna fundamentals provided a more acceptable solution in the form of the end fire couplet.

END FIRE COUPLET (FIG. 2)

Signals from the front induce currents in element "a" 90° ahead of those in element "b". However, the currents from element "a" have to traverse a λ/4 line before joining the currents from element "b" at the junction "c" and their 90° lead is cancelled thereby. Thus currents from both elements are in phase at the junction.

Signals from the rear induce currents in element "a" 90° behind those in element "b" and after traversing the λ/4 line this lag is increased to 180° so that cancellation occurs at the junction.

The polar pattern exhibits a high front to back ratio as a result.

The principle of the end fire couplet was applied to the stack of yagis.

THE STAGGERED STACK (FIG. 3)

The bottom yagi of each vertically stacked pair was advanced on its mounting so that it projected λ/4 in front of the upper array. The phase lead in the forward direction thus introduced was cancelled by adding another λ/4 to the phasing harness connected to the bottom yagis thereby ensuring that currents from both arrays arrive at the feeder junction in phase.

Signals from the rear are subject to 90° lag by the position of the bottom yagi relative to the top, plus the additional 90° lag caused by the extra length of phasing line. Cancellation occurs at the junction, i.e, the back lobe is eliminated.

PRACTICAL RESULTS (FIG. 4)

Without the staggered stacking arrangement the front to back ratio of the complete array would be the same as that for one yagi, i.e., 12.5 dB.

Theortically, the back lobe could be cancelled completely but in practice several factors act to limit the degree of cancellation. The most important of these is probably the stacking distance. Obviously the signals from the rear must induce the same currents in both antennas of the staggered pair in order to achieve complete cancellation. This is possible only if both antennas occupy the same space as in the end fire couplet. As the stacking distance is increased so the cancellation departs from the ideal.

Nevertheless, the improvement obtained in this case (11.5 dB) is well worthwhile as reducing interference from the rear from its previous level of two "S" points down to four may make the difference between being able to just detect that DX signal to being able to copy it comfortably

This is without consideration of the added advantages of the staggered stack.

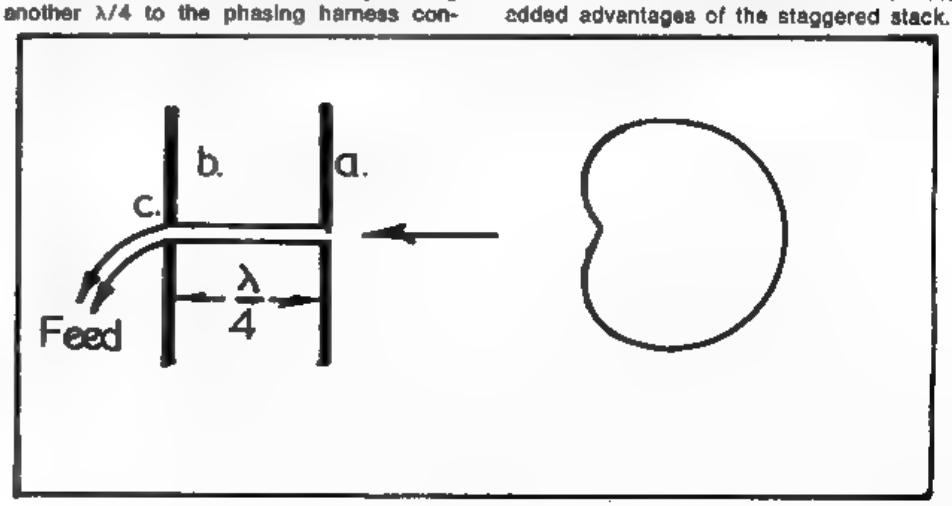


FIG. 2: End-Fire Couplet and its Radiation Pattern.

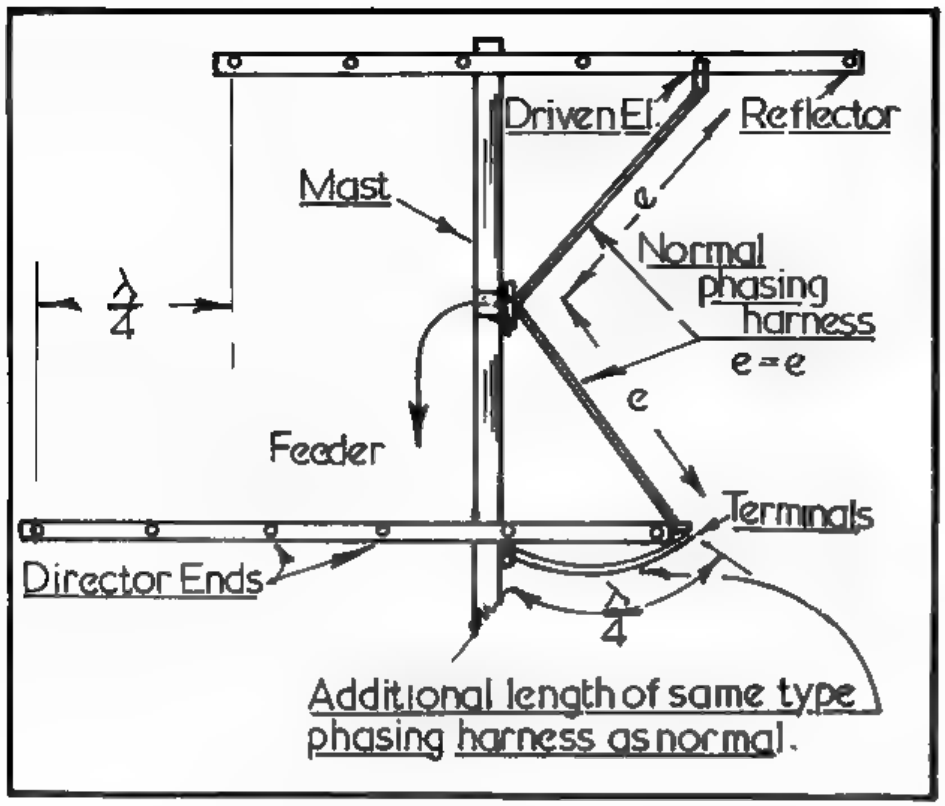


FIG. 3: General Arrangement of Stacking Yagis to obtain Back Lobe Reduction.

BONUS POINTS

There are several other advantages to be had from staggered stacking. Those who wish to do so may verify the following by applying simple mathematics.

The same process which cancels the back lobes also reduces the side lobes to some extent as well as narrowing the main beam slightly. The stacked antenna gain is increased by a small amount over a non-staggered stack (about 0.25 dB in this case) as well as being at a higher level for a given side lobe amplitude because the stacking distance does not have to be reduced by the same amount to obtain that side lobe level as would be the case in a non-staggered stack. This is illustrated in the polar patterns. Note that the 3 dB beam width of the stack of four (2 x 2) is half that of the individual yagi, indicating 6 dB increase in gain.

A further advantage lies in the wider tolerance to impedance variations between the individual antennas making up the stack. This tolerance is a result of the asymmetrical phasing arrangement.

Finally it is different and thereby provides an excellent subject for rag chewing.

CONCLUSIONS

Staggered stacking provides a cost and effort effective way of improving the performance of an array of antennas.

Although applied to yagis in a vertical pair in this example the principle applies to antennas of any type in any plane. The point to remember is that currents due to signals from the desired direction must

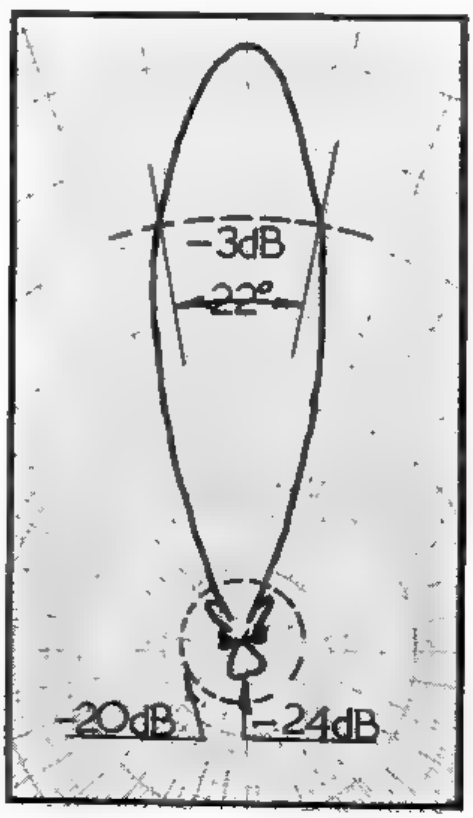


FIG. 4: E Plane Pattern 4 x 6 Element Yagis.

be in phase at the feeder junction. Although the phasing sections in this case are balanced open lines, the principle applies to any sort of transmission line. The points to remember here are to take the velocity factor into consideration when cutting the λ/4 sections and to ensure that the phasing lines are the same impedance as the impedance of the individual antennas, i.e., not transformer sections. This is not meant to imply that the principle cannot be applied to antennas where the phasing lines double as impedance matching transformers but merely to indicate that in that case additional steps may be necessary to ensure correct matching.

Happy staggering. ■

REFERENCES.
1. ARRL Antenna Book, Pages 154-156.
2. Design of Yag Aerials R. M. Fishenden and E. R. Wiblin, Proc I.E.E., Pt. III, Vol. 96 No 39, Jan., 1949, p.8.

CALL SIGNS

Attention of members is again drawn to the habit of omitting the prefix "VK" when announcing call signs. This is particularly noticeable in the case of phone operation.

Such practice is not in accordance with International requirements and contravenes the Wireless Telegraphy Act. Operators should be careful that they use the full call sign allotted to the station concerned.

- This appeared in AR August 1955 and is again necessary as a reminder.
- Remember that during a "session" of short to and fro transmissions it is only necessary to announce call signs at the beginning of the "session" and not less than every 10 minutes thereafter
- — and this applies equally to contacts through the repeater.
- Separate concessions apply only in respect of WICEN communications.

TECHNICAL CORRESPONDENCE

Short Active Receptor

Ian R. Bryce VK3BRY
2/15 Rockley Road, South Yarra 3141

In the December, 1981 AR, Ross Treharne explains his version of how short active antennas work. He stresses throughout that ". . . it is not . . . the antenna which actually picks up the signal", it is just a return path. "The car body collects more energy . . . the whip is just an earth return."

These views, which contradict the theory of antennas as I understand them, cannot go unchallenged.

In an effort to discover the reasons for his views, I studied his references in detail. In the 1971 digest paper, he observes that the signal from a short horizontal dipole on a vertical mast is little changed if the dipole is shorted. He interprets this to mean that the mast does most of the reception, and the dipole is only an earth return. But, of course, vertically polarised signals are efficiently received by the effective mast — top hat system, and any unbalance or asymmetry can render these stronger than the wanted horizontal pick-up.

In the next two references, Cook describes high impedence buffer amplifiers for short antennas. There is no suggestion that it is the earth connection picking up the signal.

The 1980 Symposium Extract follows a similar line to the 1971 paper, and in the 1981 AR article by Barnes uses the earth and antenna for their proper functions.

So how do short active antennas work? The mechanism is very simple. The buffer stage (such as a source follower) removes any load admittance from the antenna, i.e.: it sees open circuit. Thus there are a number of conducting bodies (the whip, car or mast, earth, etc.) insulated from each other.

As each is small compared to a wavelength, there are no resonances. The quasi-stationary solution applies — given the electric field at any instant in time, each conductor is at the potential it would assume in a constant electric field of that value.

The electrostatic field problem can be solved in many ways. I have used conformal transformations and resistance-paper mappings. Generally, an isolated conductor will assume the voltage which would exist at its "midpoint" if it were not there; i.e., proportional to its height above ground. This can be used to find the voltage from a single wire or a dipole as in Figures 1 and 2.

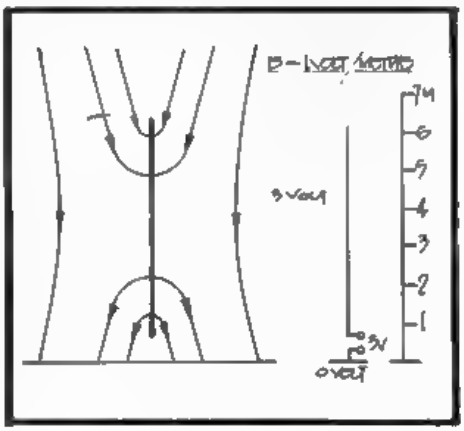


FIGURE 1

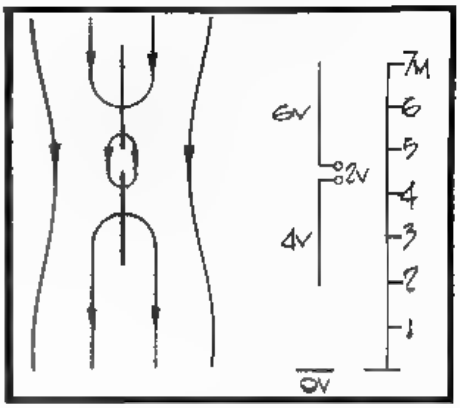


FIGURE 2

If more complex shapes are involved, estimation of the capacitances between conductors will show how the voltage is divided, as in Figure 3, for a car with a short active monopole.

If a mast or feeder is earthed, this will distort the electric field as shown in Figure 4.

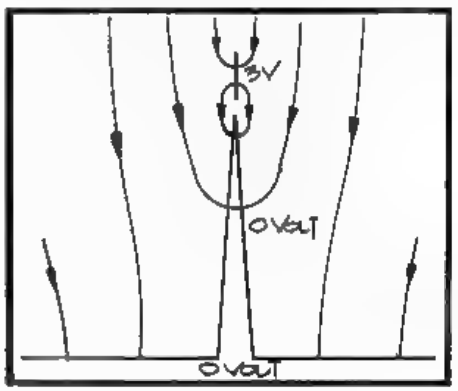


FIGURE 4

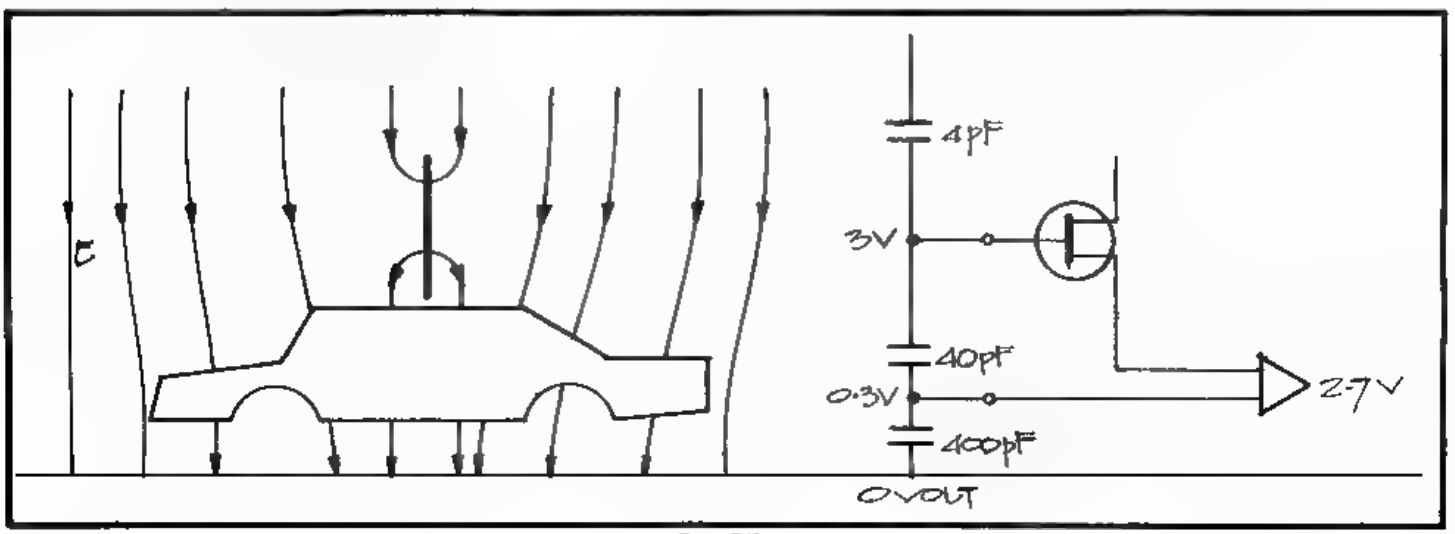


FIGURE 3

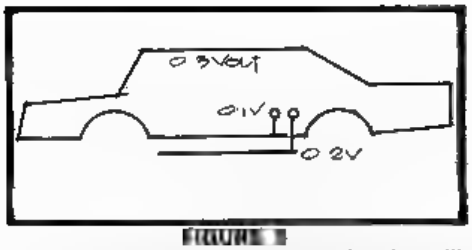


FIGURE 5

The "antenna under the running board" picks up little voltage, as Figure 5 shows, but can be used as a passive tuned antenna because of its low impedence.

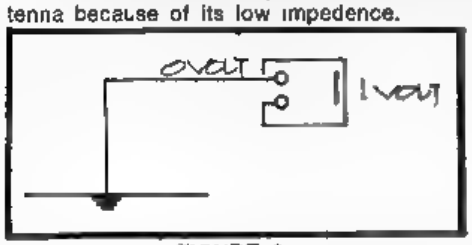


FIGURE 6

The "Little Wonder" uses the voltage of the chassis of the radio, if it is not earthed, as in Figure 6. If both the chassis and the antenna terminals are earthed, there is no electrostatic pickup, and operation will rely on the magnetic field in the loop created by different earthing points (Figure 7).

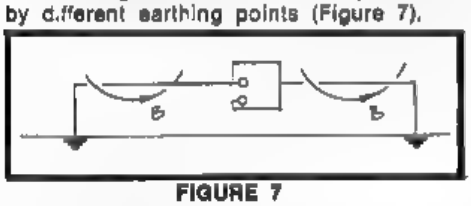


FIGURE 7

The open circuit emf of any short antenna can be found in this way. When a source-follower is employed, this same voltage is applied to the cable or the receiver.

For passive or resonant small antennas, the actual voltage occuring at the terminals can be found by voltage-divider action between the antenna's capacitance and the receiver's input resistance and reactance, as shown in Figure 8:

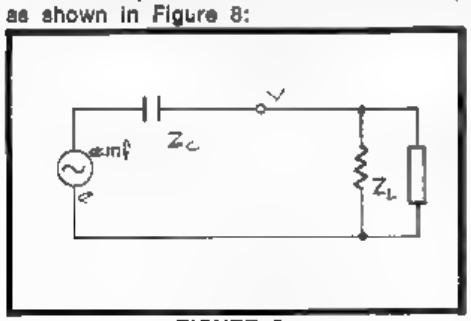


FIGURE 8

$$V = eZL/(ZL + ZC)$$

The radiation resistance can be neglected if it is $10\pi^2 h^2/\lambda^2$ ohms for a short monopole. ■

.. ::

We seem to be moving toward two extremes. The water in our pipes will be either dried up or frozen. That is a weather comment.

The Even Simpler Regulator

Bernie Wills VK4ABY
Kent Street, Forest Hill, Qld. 4342

Your attention is drawn to an error which appeared in A.R. in the January 1980 issue, in an article entitled "The Even Simpler Regulator" (p.12).

Fig. 2 (p.13) shows the incorrect placement of a 1 uF tantalum capacitor when the LM 317 regulator is used. Similarly, it would be incorrect for any other regulator having a resistor between the common leg and 0 V.

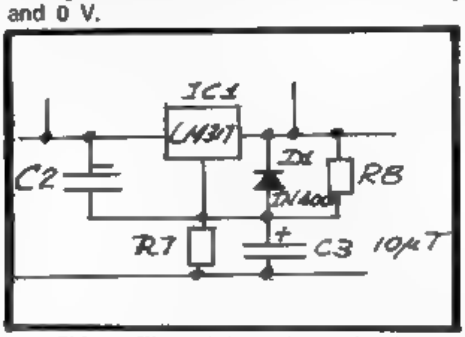


FIG. 1: The original Fig. 2 circuit.

I have built three different power supplies using this basic circuit.

(a) 20 A 13.8V for HF transceiver
(b) 1 A 12V for TV monitor
(c) 6 A 5V for a micro-computer.

The most recent of these (c) showed 400 mV p-p ripple (C.R.O.) on the regulated output with a load of about 2A, when a 10 uF tantalum capacitor was used as in the diagram above. This was reduced somewhat when a 1 uF capacitor was used, but disconnection of the capacitor removed all noticeable ripple. No problems were observed with (a), but the picture on the TV (used with microcomputer) did tend to be unsteady until the problem was fixed. All the suppliers had adequate filter capacitance and suitably wound transformers. The ripple has disappeared in each case when the capacitor was isolated.

The National Semiconductor Voltage Regulator Handbook shows that if a tantalum capacitor is used, it should be connected from the input to 0 V as shown below.

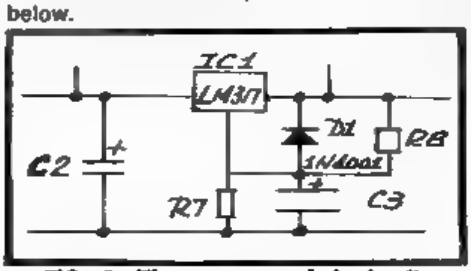


FIG. 2: The recommended circuit.

I hope that this information will be of some assistance to your other readers.

TECHNICAL EDITORS' COMMENTS

The purpose of C2 is to prevent instability or oscillation of the regulator IC which may occur when the lead length between the filter capacitors and the IC is more than, say, 75 mm. The placement of C2, as shown in Mr Roden's article "The Even Simpler Regulator," A.R., Jan., 1980, is quite satisfactory from that point of view.

Unfortunately, C3 does not have negligible impedance at 100 Hz, compared to R7, so any ripple across the filter capacitors appears across the capacitive divider C2, C3. C3 is shunted by R7. Typically 5% of the ripple could appear across R7 and a similar amount would consequently appear in the output. In many applications this would not be significant.

Mr Wills has apparently observed this effect and found corrective action necessary. We are grateful for his letter bringing this problem to our attention.

VK3AFW ■

QSP

"BLACK BOX" OPERATORS

Probably one of the best balanced of notes about the real meaning of amateur radio comes from the pen of Pat Hawker G3VA, writing his Technical Topics column in Rad. Comm., February 1982. This is what he says.—

"Over the past few months I have attempted to highlight some of the problems facing those who do not wish to see amateur radio become predominantly a 'consumer-appliance' hobby. There is, I have found, a wide measure of agreement that the 'non-professional' home-constructor and experimenter can no longer hope to compete on anything like equal terms with the major firms in the construction of full-facility HF or VHF transceivers, while the strongest signals tend to come from the large beam antennas that do not fit easily into many urban or residential areas. Furthermore some of these stations are tending to become well beyond the financial reach of many who in the past have formed the solid core of the hobby.

To maintain the 'experimental' tag some believe that the hobby should concentrate more on the latest technology, in advance of the factory-built rigs: various forms of spread-spectrum modulation; data 'packets' to provide 'electronic mail' by means of advanced store-and-forward repeaters; fast and slow-scan colour television; more computer-to-computer links in which the RF path is basically a substitute for a cable or optical fibre. These are indeed mostly laudable projects but not altogether in keeping with what most of us tend to think of as "amateur radio" for the majority.

So some consider the answer would be to encourage a return to more basic communications, using equipment that is simple enough for even newcomers to build, CW rather than phone; DSBSC rather than SSB, and with less emphasis on competition between stations in the form of contests and awards. Yet others say 'Go higher, young man' and make more use of orbital repeaters and self-excited microwave rigs, or alternatively become more scientific in the study of propagation anomalies.

In practice, I suspect there is no all-embracing answer. It is a measure of the quality and depth of the hobby that it can encompass so many diverse threads; including, let it be said, the appliance-user who intends to become efficient in 'inter-communication' — accepting that this is an inherent part of the ITU definition of the amateur service as a form of self-training. Good OPERATING is still a highly skilled craft that is rightly part and parcel of experimental amateur radio." ■

Manila Conference

Edited by R. G. Henderson VK1RH
171 Kingsford Smith Drive, Melba, ACT 2615

This is an edited report on the Fifth Conference of the International Amateur Radio Union Region 3 Association, held at Manila, Philippines, from 2nd to 5th April 1982. Australia was ably represented by Federal President, Peter Wolfenden VK3KAU, and David Wardlaw VK3ADW.

SCOPE OF REPORT

This report is intended to give general information about the Fifth Conference of the IARU Region 3 Association, which commenced on 2nd April, 1982, and concluded on 5th April, 1982, in Manila. For information in more detail reference should be made to the official minutes.

PARTICIPANTS

The participants were delegates of eight Member Societies, viz.: ARRL, JARL, MARTS, NZART, PARA, RAST, RSGB and WIA, the President, Vice-President and Secretary of IARU and four Directors and the Secretary of the Region 3 Association. Regions 1 and 2 were also represented.

OPENING CONFERENCE

The Conference was opened by Gen. Ceferino S. Carreon, Commissioner of the National Telecommunications Commission, Quezon City, Philippines.

In his address, Gen. Carreon said that PARA was honoured to host this important Regional Conference of the Association. The importance of promoting international friendship and goodwill via amateur radio was recognised. The General also took the opportunity to announce the release of the 10.10-10.15 MHz band, albeit with certain time conditions, for the use of the amateur radio service in the Philippines.

SIXTH REGIONAL CONFERENCE

Only NZART had submitted a written invitation to host the next Regional Conference in 1985. The invitation was accepted.

REPORTS

Formal reports submitted by the Secretary, individual Directors and Member Societies were noted.

The Secretary mentioned that the Bangladesh Amateur Radio League had since obtained membership of IARU and that it would now apply for membership of the Region 3 Association.

POLICY MATTERS

1. WARC 79.
   Several Societies indicated that the new band allocations gained at WARC 79 for the amateur radio service are being implemented. The Conference recommended that all IARU Regions should agree to a common policy on frequency allocations for the amateur bands.
2. NEW BANDS — 10, 18 and 24 MHz.
   It was considered a very dangerous tactic to make it a policy of pressing for an additional extension of the frequency allocation in the 10 MHz band. However, there were no restrictions on Societies making individual proposals to their own administrations.
   The IARU Region 1 band plan was adopted for the 18 and 24 MHz bands in respect of their use in Region 3 countries.
   The Conference endorsed the principle of a world-wide uniformity in the subdivision of bands into certain transmission modes.
3. FUTURE ITU WARC MEETINGS.
   It was resolved that IARU observers should as far as possible attend ITU conferences that have deep Region 3 involvement. All IARU observers and observers from the Region 3 Association should function under a common leadership.
   It was further resolved by the Conference that the Directors of the Association are to make financial provisions for the possible attendance of Region 3 observers at four ITU conferences in the period to 1986. These four conferences potentially affected the amateur radio service in this region.
4. IARU RESTRUCTURING.
   The following resolution was passed:—
   "This Conference endorses the concept of changes in the Constitution of the IARU by which the Union will have as its policy making body, a body composed of representatives of the three regional organisations and the Headquarters Society, and that the sense of this resolution be conveyed to the President of IARU and the members of the IARU Restructuring Committee."
   A further resolution was passed outlining the method of implementing the above.
5. THE "SECOND SOCIETY" PROBLEM.
   To overcome the effect of more than one Society representing amateurs in a particular country, the Conference passed a resolution forming the basis by which a Member Society membership in IARU could be terminated.
   The basic provisions are:—
   (a) The Member Society has failed to fulfil its duties under the Articles of the Constitution;
   (b) The Member Society has acted contrary to the interests of amateur radio of the IARU;
   (c) The Member Society no longer adequately represents the interests of the radio amateur service throughout the country or separate territory in which it is located.
6. THE PROMOTION OF AMATEUR RADIO IN DEVELOPING COUNTRIES.
   IARU HQ is to seek information from Societies in developing countries about the type of assistance that they may require to promote the amateur radio service in their countries.
7. REGION 3 NEWS.
   The offer by JARL to produce at least three issues per year was accepted by the Conference. (A copy is sent to each WIA Division.)
8. INTERNATIONAL LICENCES.
   Societies should try to seek from their respective administrations permission for the issuance of temporary licences for visiting licensed amateurs without any prior formal or bilateral arrangements between the administrations concerned.

OPERATING MATTERS

1. INTRUDER WATCH.
   It was recommended that each IARU Society continues to work for the establishment of an Intruder Watch and that each Society establish the necessary liaison with its administration so that complaints of harmful interference to the amateur radio service can be processed in a fashion which will ensure their recognition by the ITU.
2. QTH LOCATOR SYSTEMS.
   The "Human Language Code" system proposed by JARL and the Region 1 "Locator" system were both adopted.
3. STANDARD SPECIFICATIONS FOR QSL CARDS.
   A sub-committee was formed with JARL and NZART to develop a standard QSL card. This sub-committee was asked to report back at the next Region 3 Conference
4. REGION 3 AWARD.
   The proposal by NZART for the above award, together with its rules, was accepted by the Conference.
   NZART was chosen to administer the award on behalf of the IARU Region 3 Association.
   The printing and design layout of the award certificate was to be undertaken by MARTS.
5. INTERNATIONAL BEACON PROJECT (IBP).
   The IARU HQ was urged to take necessary action to ensure proper co-ordination of this project, especially in regard

to the collection of propagation studies so that they are directed to the appropriate authorities for scientific analysis.

6. EMERGENCY COMMUNICATIONS
The Conference recommended that Region 3 Association should review the subject of emergency communications in their own countries from administrative and operational points of views and report within a year.

7 MICROWAVE BANDS.
All encouragement should be given to activity on these bands and also to the development and manufacture of suitable equipment.

AMENDMENTS TO CONSTITUTION

The number of Directors was increased from four to five.

The subscription rates are now to be decided at a Conference of the Region 3 Association.

FINANCES

Considering the finances required it was decided that the annual subscription rates be computed as follows:—

Up to 5,000 members, US$0.50 per member; subsequent 5,000-10,000 members, US$0.30 per member; over 10,000 members, US$0.06 per member.

For the WIA this averages out at about 40c Australian per member.

GENERAL BUSINESS

1. The following papers were discussed and the subjects contained therein were endorsed:—

PRESERVATION OF THE STANDARD OF THE AMATEUR SERVICE.

This paper dealt with the ease of obtaining amateur licences by stations operating under the maritime mobile service.

THE AMATEUR CODE.
A more general model of the Amateur Code as proposed by NZART was noted. It was recommended that it be adapted for international use.

THE USE OF EXCESSIVE POWER.
Concern was expressed on the apparent disregard on the use of excessive power by some amateur stations.

CO-ORDINATION OF THE CONTEST CALENDAR.
HQ IARU are to publish in "The Calendar of the IARU" the contest activities of the Member Societies in an attempt to avoid clashes of contest events.

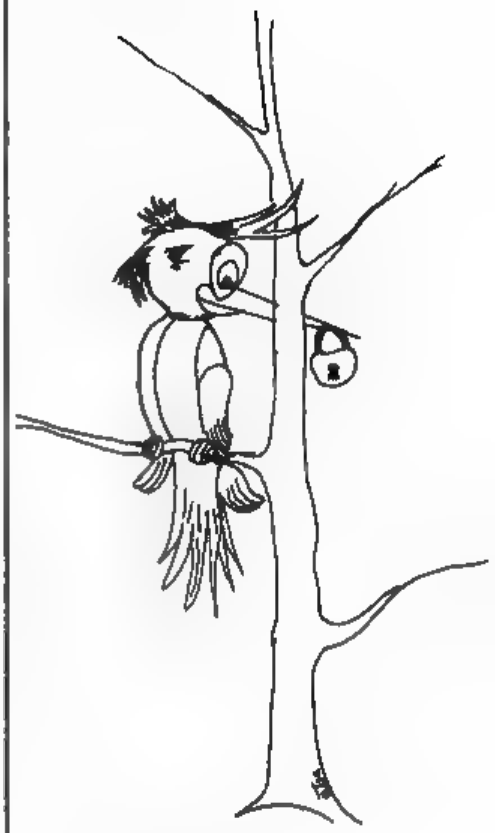
WORLD COMMUNICATION YEAR 1983.
The IARU as well as the Regional Associations should actively involve themselves in promoting amateur radio throughout 1983.

2. The Bangladesh Amateur Radio League (BARL) was admitted as a member of the Region 3 Association.

ELECTION OF OFFICE BEARERS

The following persons were nominated and elected:—

Chairman/Director: David Rankin 9V1RH/VK3QV.
Director: Jose Gonzalez DU1JMG.
Director: Keigo Komuro JA1KAB.
Director: Jumbo Godfrey ZL1HV.
Director. Michael Owen VK3KI.
Secretary: Masayoski Fujioka JM1UXU. ■



Noise Blanker for the Woodpecker.

BOOK REVIEW

THE NOVICE OPERATOR'S THEORY HANDBOOK

To adorn the shelves of the technical book shops comes an excellent publication for Novice licence candidates who have had little or no experience with electronics.

It is designed to take a raw beginner of average intelligence to the level required to pass the DOC Novice operator's THEORY examination.

The authors are Graeme Scott VK3ZR, a well known Melbourne amateur, who has been a technical teacher for many years, and Sandy Brucesmith VK2AD, currently with the Sydney office of Kenwood.

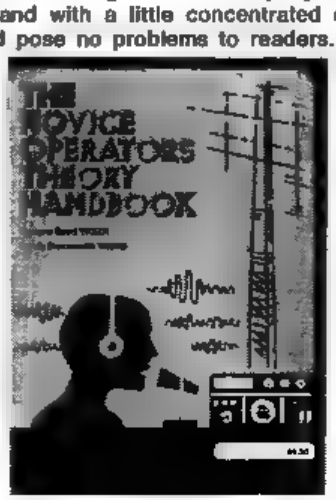
Graeme was also the Education Co-ordinator of the WIA Federal Executive up to three years ago, and his committee was the driving force behind the current WIA/DOC syllabus of all amateur operators' examinations.

The book which is designed to the Novice syllabus has 80 pages in 17 chapters Chapter titles are.—

Electrical Laws and Circuits, Vacuum Tubes, Semi-conductor Devices, Power Supplies, HF, Morse and AM Transmitters, SSB Transmitters, Receivers, Propagation, Transmission Lines, Antennas, Interference, Test Equipment, Circuit Symbols, Morse Code and Answers to Questions.

Each chapter goes into sufficient depth to enable the reader to answer associated questions which are listed at the chapter's end.

Copious diagrams accompany each item, and with a little concentrated effort, should pose no problems to readers.



The questions asked at the end of each chapter are in the form as they appear on the multi-choice exam paper. The answers to these are at the end of the book.

The contents itself has been published previously in serialised form in another local amateur publication, and is now presented as a whole work in the one volume.

Graeme is to be congratulated on his efforts, and a candidate who has fully studied his book, together with the DOC operator's handbook and Morse code requirements, should have little difficulty in passing the Novice operator's examination.

The book represents good value at $6.50 (allow $1.00 extra if ordering by post) and is available from the following.—

Most WIA Divisions, technical book shops in capital cities, major equipment retailers and distributors or direct from the authors —Graeme Scott VK3ZR, 11 Balmoral Crescent, Surrey Hills, Victoria 3127, and Sandy Brucesmith VK2AD, 110 Rosemead Road, Hornsby, NSW 2077

(Reviewed by VK3UV.) ■

Heard Island

Ken J. McLachlan VK3AH
PO Box 39, Moorooibark 3138

Probably one of the loneliest and inhospitable places in the world, most of it permanently covered by ice and inhabitated only by fauna, but visited regularly by gusting and freezing winds. This island is located in about latitude 53° 01'S, longitude 73° 23' E and lies some 4000 kilometres south-west of Perth, is the intended home of the expeditioners for the proposed operating period of some six weeks and is a project being undertaken by the DX CHASERS CLUB, as detailed on page 22 of AR last month.

Documentation of who was the first to discover Heard Island seems to be a bit sketchy, but it appears that in late 1853 a vessel en route from Boston to Melbourne by chance sighted land and its skipper, Captain Heard, logged it but did not land.

Two years passed before a landing by another vessel was made and then there was a long succession of whalers seeking the riches from the slaughter of abundant numbers of sea elephants which, because of uncontrolled slaughter, became extinct. Little more was heard until 1910. Whilst investigating the potential of establishing a whaling industry base at Heard the British flag was raised and the island claimed.

Early in 1947, Sir Douglas Mawson, who had visited Heard some 34 years before while en route to Antarctica, prompted the authorities to appoint an Authority, which is known today as the Australian National Antarctic Research Expeditions (ANARE).

The Heard Island ANARE group arrived on the 26th of December, 1947, 15 days later the Australian flag was raised and the island was claimed for the Commonwealth, although the sovereignty change over from Great Britain to Australia did not actually take place until 1951, and since that date the laws in force in the Australian Capital Territory also apply to Heard Island where these laws are appropriate.

CQ de VK HEARD

One member of the 1947 ANARE exploring group, radio amateur Alan Campbell-Drury, the first to sign VK HEARD, remembers his trip some 35 years ago as if it were yesterday and recalls the majestic sight of smouldering Big Ben, a dormant volcano, which towers some 9,005 feet above the sea, and avalanches of ice dropping away and breaking the eerie silence of the night. This forbidding mountain has been conquered only once by a climbing expedition which was on its second attempt in 1964-65.

Alan in those days signed VK3ACD/HEARD ISLAND, but now signs VK3CD and is well known for some of his outback adventures (refer May 1982 AR, page 8). He describes the area as very rugged and beautiful, but he still remembers the cyclones (some 22 being recorded during his stay), high winds and the severe gusts that lash the island, making landings very difficult and dangerous. He also recalls that, during his fifteen months duty, at various periods in excess of 100 knot gusts were recorded and once whilst repairing an antenna he was bodily lifted off the ground and transported some six feet, much against his will.

QRP — CW

The equipment Alan used was a Type A Mark 3 with an output of some four watts into the aerial, and Alan remarks that the west coast of Australia wasn't very difficult but the east coasters weren't so prolific. Incidentally, Alan still has the rig and it is always with him on all his trips as a back-up for the more modern equipment he now

THE GROUP

All of the members of THE DX CHASERS CLUB are well known for their "getting things done" participation in our hobby, and Nick VK6XI has been nominated spokesman for the project. ALL media releases will be made by Nick, including those in AR. Two others, Neil VK6NE and Gill VK6YL, have, due to being very active on the bands, been delegated the responsibility of co-ordination and documentation of the acceptance of offers of food, equipment and the general necessities required. Not to be forgotten are Hugh VK6FS and Don VK6DY, whose talents are keeping them well occupied with the project.

PARTICIPATION

Now is the time for ALL amateurs, including those "that have long pockets and short arms" whether it be in VK or other parts of the world, to participate with financial and other practical and constructive assistance so that the majority can benefit whilst the sunspot activity is still high and propagation is good on all bands.

In VK alone there are nearly fifteen thousand amateurs who have talents, expertise and contacts which are pertinent to this venture. The ground work has been done — NOW is the time to participate instead of sitting back in twelve months time with hindsight and saying "I would not have done it like that" or "I could have helped but I wasn't asked". Ladies and gentlemen, as fellow amateurs you are being asked now, and the envisaged sailing time is early 1983.

Assistance for this Australian effort in the form of additional finance, actual aid and guidance in the selection and donation of suitable food, kitting, safety equipment, landing craft which are suitable for the treacherous seas and such items that are pertinent are needed from people associated with these industries. If you are technically orientated and don't fit into the above categories, small generators through to transceivers, linears and even antennae may be your forte.

The vessel's complement do not wish to dine on Caviare and go limousine style, but do require the basic comforts and a nutritionally balanced diet which will assist them to cope with the twelve week excursion into the Antarctic regions. Also reliable and adequate equipment to assist them on the island with safety under virtually any conditions they may encounter and sizable reliable electronic equipment which will require only minimum basic maintenance whilst located in these arduous conditions so that a maximum "on air" time is achieved.

BUDGET

The budget for such an expedition as this is like talking telephone numbers, but the International DX Foundation, the Northern California DX Foundation and others have committed themselves to a significant percentage of the estimated figure but there is still a long way to go so that HEARD will be heard in 1983.

The VK6 Division of the WIA has endorsed its approval of the project, including the use of the QSL Bureau and the Federal Executive supports the Division and also agrees to act as a Trustee for the receipt of bulked donations of funds involved with the advance financing, which should be acceptable to all donors.

It is envisaged that all monies surplus after the return of the expedition, the forwarding of cards, return of equipment lent and disposal of purchased equipment, etc., will be distributed on a pro rata basis to all major donors. All incoming contributions and expenditure will be accounted for and a balance sheet published at the completion of the expedition. ■

KEYER COMPETITION

The interest stimulated by the CLIPPER CIRCUIT QUIZ Competition has prompted the Publications Committee to submit you to another brain teaser, and GFS ELECTRONIC IMPORTS, of 15 McKeon Road, Mitcham, Victoria, have kindly donated a MFJ-402 SOLID STATE ECONO KEYER from the large range of MFJ products they distribute and service in Australia. The KEYER'S design is based on the renowned Curtiss IC and comes with built-in paddle, weight and variable speed control from 8-50 w.p.m. Valued at $101, it is the prize with their compliments to the lucky WIA member whose name is drawn from the correct entries submitted.

RULES

The contest is open to all members of the WIA, with the exception of all people and their immediate families associated with the production of Amateur Radio. One entry per member, each entry to be hand-written on the back of a standard Australia Post approved small envelope.

Entries must be received no later than the last mail, Monday, 2nd August, 1982, and the winning entry will be the first correct answer drawn by the Editor of AR, Bruce VK3UV, on the 3rd August.

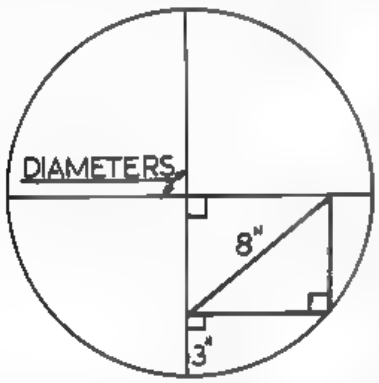
The Editor's decision will be final and no correspondence will be entered into regarding the decision. Results will be published in September AR.

All entries to: AR Competition No. 2, Box 150, Toorak 3142. On the back of the envelope your name, address, call sign and the answer to the problem.

Only entries in the above format will be accepted. All others will be disqualified.

The Problem . . .

What is the radius of this Circle?



This problem is intriguing as the elementary answer is so often reduced to its most complicated form.

Bruce VK3UV drawing the winner of the Switch.

CONGRATULATIONS TO APRIL'S WINNER

PAUL B. WEBSTER VK2BZC

25 Bayview Avenue, Earlwood, NSW 2206

who is the winner of the popular CLIPPER CIRCUIT QUIZ for the DAIWA CS401, 4 Position Coaxial Switch kindly donated by VICOM INTERNATIONAL PTY. LTD., which was drawn by Bruce VK3UV as pictured. Although not winners, thanks are extended to all participants for their interest, presentation and accuracy in the entries received.

The correct answers were:—

1 = H	6 = D
2 = F	7 = A
3 = C	8 = E
4 = J	9 = G
5 = I	10 = B

■

INTERNATIONAL NEWS

The NZART President, "Jumbo" Godfrey ZL1HV, and the NZART Overseas Liaison Officer, Jamie Pye ZL2NN, were guests of the WIA at the 46th annual Federal Convention, Melbourne, 1st, 2nd and 3rd May, 1982. Exchanges of views were exceedingly valuable

10 MHz BAND

Malaysian amateurs have been granted the use of 10.1 to 10.15 MHz on a secondary basis from January 1982. MARTS will conform with IARU Region 1 band plan — i.e. narrow bandwidth modes only.

JAPAN

The Japanese Ministry of P. and T. granted permission 23/1/1982 for amateurs to set up repeaters. JARL proposes to establish one repeater per call area plus Okinawa. Channels have to be selected from a list which covers 434.52/439.52 to 434.98/439.98 MHz and 1271.02/1291.02 to 1272.98/1292.98 MHz only — i.e. 5 MHz separation on 70 cm and 20 MHz on 23 cm, power limits 10W on 70 cm and 1W on 23 cm. On 30/9/1981 there were 504,243 amateur stations licensed in Japan (123,676 were members of JARL on 7/11/81).

PREFIXES

Since WARC 79 the ITU has provisionally allocated the following call sign prefixes:—

J8A-J8Z: St. Vincent and the Grenadines
V2A-V2Z: Antigua.
V3A-V3Z. Belize.
Z2A-Z2Z: Zimbabwe.

BURMA

A letter from the Ministry of Transport and Communications in Rangoon to the IARU and published in IARU Region 3 News of February 1982 states categorically that the administration objects to radio communications from radio amateurs and that no amateur radio licence has been issued. Amateur radio communication to and from Burma are prohibited.

2m DX

On 11/6/1981 G3VYF contacted 4X4IX on 144 MHz SSB. The distance is 3,540 km and signals were 5/9+ both ends. ■

VE to VK

in a Wheelchair

On the 2nd January, 1982, Tony VK2PJL and Alex VE7AWT decided that an attempt would be made to establish contact on 10 metres whilst both were mobile.

Nothing very startling in that one may say, but Tony and Alex are both very keen radio amateur operators and are both confined to wheelchairs, so the mobile operation was to be whilst mobile in their chairs.

In Canada, Alex was transported to a chosen site near Duncan, British Columbia, by Nick VE7FES, while a VHF link was maintained to Chris VE2DYS/7, who in turn was in contact with Don VK2DXH on HF.

In Australia, Tony was transported to his chosen site, Gan-Gan Lookout, Port Stephens,, NSW, by Jim VK2DFY and Ian VK2PKB. They also had a VHF link to VK2DXH so that there was communication at all times while antennas and stations were being set up on the wheelchairs.

At 23.08 the all clear was given that all was in readiness and both stations established contact with a R5 S3 report at each end and they continued to talk whilst both mobile in the wheelchairs for 10-15 minutes. (Numerous other VK and VE stations were also worked by Tony and Alex.)

The exercise was a great success and both disabled operators were elated at making what is believed to be the first Trans-Pacific wheelchair/mobile to wheelchair/mobile contact.

Tony's equipment was a quarter wave antenna and a TS120S powered from the wheelchair battery supply, while Alex was using a five-eight wave antenna to a TS120S. Weather conditions were extreme opposites. Canada was 0°C and snowing, while Australia was 32°C with bright sunshine.

Tony and Alex would like to thank VE2DYS/7, VE7FES, VK2DFY, VK2PKB and VK2DXH for their kind assistance in this exhilarating event. ■

I'm Fine Thank You

from "ARNS Bulletin", Sep '81

There is nothing the matter with me
I'm as healthy as I can be.

I have arthritis in both my knees,
And when I talk, I talk with a wheeze.

My pulse is weak, and my blood is thin,
But I'm awfully well for the shape I'm in.

Arch supports I have for my feet,
Or I wouldn't be able to be on the street.

Sleep is denied me night after night,
But every morning I find I'm alright.

My memory is failing, my head's in a spin.
But I'm awfully well for the shape I'm in.

The moral is this as my tale I unfold —
That for you and me who are growing old,

It's better to say "I'm fine" with a grin
Than to let folks know the shape we are in.

How do I know that my youth is all spent?
Well my "Get up and go" has got up and went,

But I really don't mind when I think with a grin,

Of all the grand places my "Get up" has bin.

Old age is golden I've heard it said,
But sometimes I wonder as I get into bed,

With my ears in the drawer, my teeth in a cup,
My eyes on the table until I wake up,

Ere sleep overtakes me, I say to myself
"Is there anything else I could lay on the shelf?"

When I was young my slippers were red,
I could kick my heels over my head

When I was older my slippers were blue,
But still I could dance the whole night through.

Now I am old my slippers are black,
I walk to the store and puff my way back.

I get up each morning and dust off my wits
And pick up the paper and read the "Obits"

If my name is still missing I know I'm not dead,

So I have a good breakfast and go back to bed.

"The Serviceman", August '81

TRY THIS with the Technical Editors

ANTENNA CARRIAGE FOR FREE STANDING TOWERS

This was the title of an item by John Tower VK6IM on page 13 of AR for August 1980

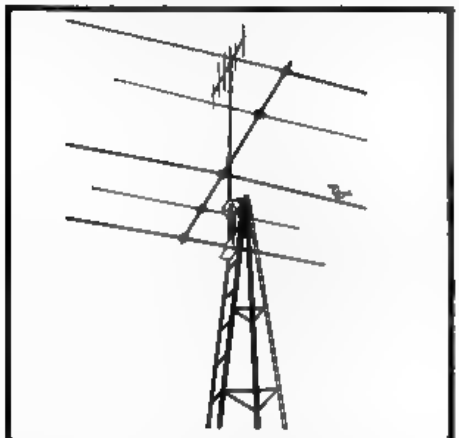


FIG 1 COMPLETE ASSEMBLY AT TOP OF TOWER

After many discussions with Harry VK4VBV who has workshop facilities in the Sugar Belt the following construction was tried out.

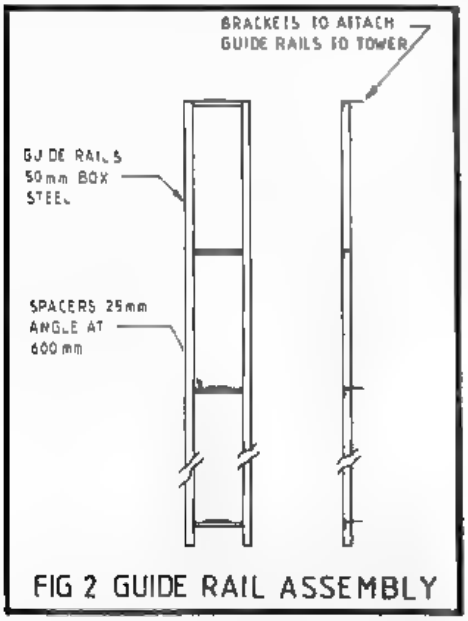


FIG 2 GUIDE RAIL ASSEMBLY

The first stage is to build a ladder type affair that will carry the carriage. This is done with box steel Two lengths equal to the height of the tower are required. You may need to join two or three lengths. The joints should be ground smooth so that they do not interfere with movement of the carriage. Note that the two lengths which run up the side of the tower should be parallel to each other.

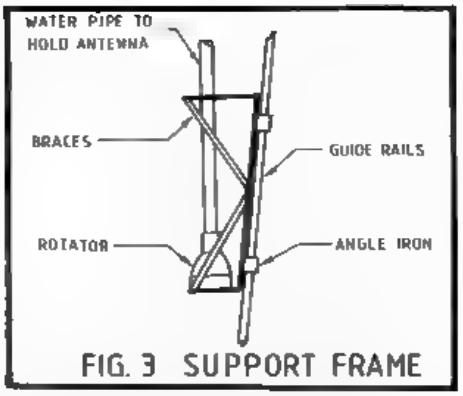


FIG. 3 SUPPORT FRAME

A winch is located at the bottom. A wire rope from the winch is run to the top of the tower then over a pulley with the end of the rope attached to the carriage. This allows the carriage to be raised and lowered by the winch. The carriage being winched up the tower guided by the rails along the side of the tower

This is of great use in an area prone to cyclones as the aerial can be lowered to about two metres from the ground.

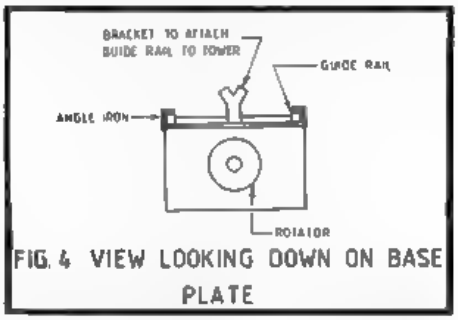


FIG. 4 VIEW LOOKING DOWN ON BASE PLATE

This item written by Allan Verner VK4ARV originally appeared in "Backscatter". Thanks to Peter VK4PV the publicity officer of Townsville Amateur Radio Club for bringing it to the attention of the Technical Editors. ■

From 'The Propagator', Feb. 82

EQUIPMENT REVIEW

Ron Fisher VK3OM
3 Fairview Avenue, Glen Waverly 3150

The Standard C58 Multi-Mode 2m Transceiver

Many amateurs will remember the name STANDARD from a few years ago as being a hand-held two metre FM transceiver They achieved a degree of popularity although were never sold in large quantities. Here in Australia the name has disappeared, but in the UK at least a few models have popped up from time to time. Now GFS Electronic Imports have acquired the local agency for them and I can see that STANDARD will soon become a familiar name in two metre equipment. STANDARD is a product of the MARANTZ Company, well known in the high quality audio field.

MULTI-MODE TRANSCEIVERS

It seems only a short time since we reviewed one of the first multi-mode two metre tranceivers, it was in fact 1976, and we were amazed on how they managed to fit all of those electronics into such a small enclosure. To say that things have changed would be an understatement. The C58 weighs only 1.45 kg complete with battery pack and measures only 129(W), 52(H), 190(D) mm which is exactly ⅓ of the size of that first transceiver. Not only that but the little C58 includes functions that weren't thought of in those days. The only penalty one must pay is perhaps a somewhat low power output of only one watt, however this is usually easy to overcome with a small external amplifier.

The C58 comes with helical antenna and microphone, but batteries are an extra. It can take either standard AA penlight dry cells or nicad cells and a charging socket is provided on the rear of the set.

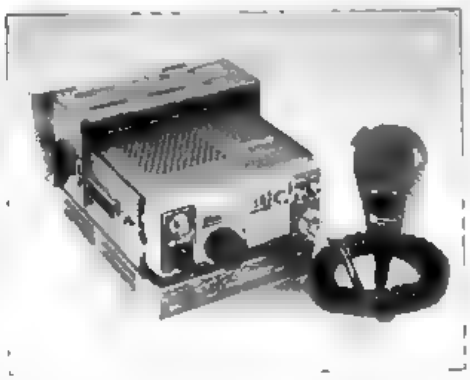
Let's look at all the features that are incorporated in the C58.

STEPPING ALONG

Naturally it is fully synthesized and tunes in steps rather than continuously. The steps are 100 Hz, 1 and 5 kHz in either SSB or CW mode and 100 Hz, 1 or 25 kHz in the FM mode. It is possible to change the 25 kHz step to 5 kHz by means of an internal switch but certainly for Australian conditions the 25 kHz stepping is ideal. The stepping rate is controlled by one of the eight push buttons on the front panel.

PUSH BUTTON CONTROLS

A second button enables the operator to select a one MHz up frequency, so if you start at 144 a push of the button selects 145, 146 or 147 in order. You can, of course, tune there by either turning the tuning knob or by using the up/down scanning button on the microphone.



The Standard C58 is a compact, transportable, multi-mode 2 metre transceiver with full 144 to 147.999 MHz coverage using either USB/LSB, CW or FM. It is only slightly larger than some of the so-called hand-held transceivers. However, perhaps we are getting ahead of things.

Before returning to the other push button functions, lets look at the frequency read-out system. This is a four figure liquid crystal display. The size of this is the same as found on a standard man's watch. As well as frequency, memory selection, scan operation and noise blanker on are indicated. Frequency read-out to 100 Hz on the two metre band, of course, requires more than four digits. Here is how they do it: for a frequency of 144.124 MHz. If either 5 or 25 kHz stepping is selected, the display shows 4.123; if 1 kHz stepping is selected, the display shows :4.123. In the 100 Hz mode, the display shows .1234. The one preceding dot in this situation indicates that the MHz is an even number, if it happened to be 145 or 147 MHz, then the display would show :1234. This all takes a little time to get used to, however operating in a particular mode, either SSB or FM, tends to sort things out.

Other push buttons provide for memory entry, memory recall, memory scan, 1750 Hz tone burst (not really required in Australia but handy if you intend taking the unit overseas), and finally a restore to normal button to stop scanning.

The meter acts as an 'S' meter, RF output meter and battery condition indicator. The latter function is selected by a slider switch on the rear panel which also operates the meter and display light. Two toggle switches select USB/LSB/FM and simplex/repeater normal/repeater reverse operation. The audio gain and squelch controls are concentric and a momentary push of the audio control selects noise blanker operation. Two RF output connectors are included, a BNC on the front to which the supplied helical antenna is connected and a standard SO-239 on the rear panel.

A RIT control gives ±1 kHz receiver tuning in all modes of operation.

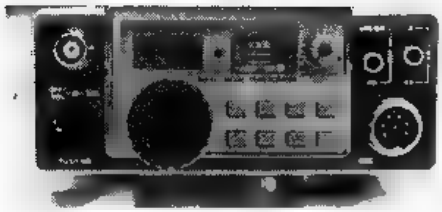
THE C58 ON THE AIR

The first thing noticed (by me) was that good eyesight is a desirable thing to have when operating the C58. As can be imagined, all of those controls on a front panel size 129 x 52 mm have to be small. I guess it's a case of you cannot have things both ways.

Operation as a home station can be quickly learned and mobile operation on FM is best accomplished by starting at a known channel and then pulsing up or down in 25 kHz steps with the microphone control. In this way most of the usual FM channels can be selected without even looking at the transceiver. I note that a mobile mount is available as an optional extra and that a very compact 25 watt amplifier can be attached to this.

AUDIO

Received audio is surprisingly good from the small built-in speaker and even at full audio gain very little distortion was noticeable. An external speaker output is on the side of the cabinet and a good quality speaker gave better than average reproduction. Transmitted quality on both FM and SSB was likewise reported as better than average.



Front view. Note push button controls.

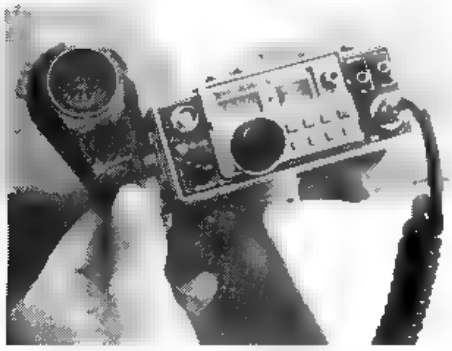
POWER

Power output was checked with a fresh set of dry batteries and was spot on, one watt. With a specified current drain of 600 Ma on transmit, dry cells have a rather limited life, making operation rather expensive. I would recommend investing in nicads. Of course, for mobile work you can run the unit directly from the 12 volt car system. Unfortunately the special power input connector was not supplied with the test transceiver, so I was unable to check mobile operation using external power.

Rear view

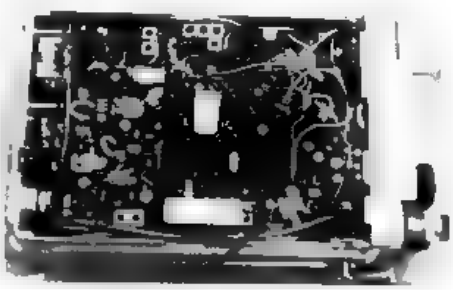
SENSITIVITY

Receiver sensitivity was equal to one top line transceiver in the shack and somewhat better than a well known hand-held unit that I have. However, it was noticed that cross-modulation was inferior to both. With the local channel two repeater in operation, its audio was loud and clear on the somewhat weaker channel three repeater 50 kHz away. This could present a few problems when operating on large antennas from home.



Transceiver and microphone. Microphone has a scanning switch.

SSB operation was simple and I found myself tuning up and down the band using the microphone scanning switch with the 100 Hz steps selected. This was much easier than using the somewhat "notchy" tuning knob on the transceiver front panel. Five memories can be programmed into the unit and selected by either the memory scan feature or by pushing the MEMO RCL once for memory one, twice for memory two and so on. As mentioned before, these buttons are small and one finger covers two buttons, so taking a stab in the dark may not produce the desired result.



Internal view.

INSTRUCTION BOOK

The instruction book is well written and contains plenty of information on operation, theory and alignment. A full circuit diagram is included as is a complete parts list. It should be noted that alignment and repair of a complex transceiver of this type should not be attempted unless you have both the knowledge and equipment necessary. However, the whole book is worth reading, you will be better informed on the operation of the C58.

CONCLUSION

The C58 is a delightful little transceiver and does everything it is designed to do in a very efficient way. It is however very small with small controls and the intending purchaser should be sure that it meets his requirements. It is quite amazing just what one watt will do with a reasonable antenna, but performance with the supplied flexi-antenna is limited to working into the local repeaters unless you happen to be located on a mountain top or in an aeroplane.

Our test unit was supplied by G.F.S. Electronic Imports of 15 McKeon Road, Mitcham, Victoria, to whom all enquiries should be directed. ■

NATIONAL EMC ADVISORY SERVICE

Tony Tregale VK3QQ
38 Wattle Drive, Watsonia 3087

This month's column has been prepared by guest writer Gordon Bracewell VK3XX. This excellent article should provide interesting reading and provoke much thought. It should appeal to all whether it be the Old-Timer, someone who has just acquired their licence or the SWL intending to become a Licensed Amateur.

EMC — "The Total Problem"

Gordon Bracewell VK3XX

EMC means electromagnetic compatibility. What is electromagnetic and with what is it compatible or not? And what are the consequences?

1. Electromagnetic in this context means electromagnetic waves or radiation. It covers the spectrum from very long radio waves, through visible light to atomic radiations — e.g., X-rays or gamma rays. For the purpose of this discussion we are interested in only a narrow range, i.e. from the frequency of radio broadcasting, up through the so called "Short Wave" region to VHF television and stereo broadcasting and ultimately to UHF television, i.e., 500 kHz (kilohertz) to 500 MHz (megahertz), or so.
2. Compatibility is the effect of one piece of equipment upon another and vice versa. When it is objectionable it is called interference.
3. The consequences can usually be confined to the causing of nuisance. This has both legal and social consequences both in statute and in common law.

EMC IN THE DOMESTIC ENVIRONMENT

Here we will confine the discussion to the problems of the domestic or home environment. There are many varied and difficult problems in other areas such as the industrial and military fields.

Virtually every electrical appliance becomes involved in consideration of EMC. There are those appliances which are designed and/or intended to produce electromagnetic radiation — e.g., radio transmitters — amateur, business, marine, citizens' band. These are strictly controlled under wireless telegraphy regulations — although some may escape the net! Current technical standards determine the permissible radiations on other than the specified frequencies.

There are then those which are intended to do something else and as an unintended by-product they can produce electromagnetic radiation which can cause nuisance — e.g., motor cars, television sets, electric irons, refrigerators, freezers and air-conditioners, heating systems, electric tools, food mixers, vacuum cleaners and many more right down to the humble electric light. By far the majority of these do not cause long term nuisance — for example they may manifest themselves by clicks and thumps on radio/hi-fi apparatus, or by flashes on television screens. Tolerance to such effects is very individual but is largely a function of the extent of exposure to the "interference". A new and potentially very troublesome source of parasitic electromagnetic radiation is the home computer.

Additionally, it must be recorded that EMC also includes the susceptibility of equipment to interference. Some is much more tolerant than others. In general, susceptibility problems are limited to radio and television reception, home audio and video equipment and home computing equipment. Susceptibility of the latter equipment certainly exists but is difficult to identify. Spurious errors in computation could equally be a fault in equipment or susceptibility to outside interference.

In the other cases, susceptibility gives rise to an annoyance which can often be identified, and this is where the social and legal consideration come to the fore. These are the ones with which the WIA EMC Advisory Service is mainly concerned.

It is certainly irritating to a consumer, having spent several hundred dollars on a colour TV or a hi fi system, to find that his quiet enjoyment of that equipment is disturbed by the "interference" frequently caused to it by for example:—

(i) the taxi radio service just down the road.

(ii) the CB radio enthusiast driving up and down the road talking to his friend in a car a couple of miles away.

(iii) The amateur radio enthusiast next door talking to his friend overseas.

Each of these perfectly legal and government licensed and regulated activities can cause genuine interference to radio and TV reception by radiating emissions on the frequencies of public broadcasting services. The responsibility for removing the problem, which implies non-compliance with regulations, is quite clearly defined in the legislation, i.e., the transmitting equipment must be corrected to meet the technical standards imposed by the licence.

On the other hand the consumer's apparatus may respond spuriously by receiving radiations legitimately produced on frequencies other than those to which the apparatus is tuned. Technically, all radio receivers are subject to the potential of spurious responses. Good design and manufacture recognizes this but the market place also dictate that money spent here is not always as profitable as money spent in advertising, or fancy packaging and presentation of the product. In other words the benefit of money spent in good design for electromagnetic compatibility is neither visible to the consumer nor to the manufacturer's finance or marketing director.

INTERFERENCE

One limiting example is the hi fi audio equipment which suddenly takes on the role of a radio receiver when subjected to strong electromagetic fields. If this happens who is to blame — the manufacturer, the consumer (user), or the person or organisation producing the "interfering" electromagetic radiation, perfectly legal and totally within the terms of his licence and the applicable regulations.

LEGISLATION??

IS LEGISLATION NECESSARY TO PROTECT THE CONSUMER'S INTEREST BY IMPOSING EMC SUSCEPTIBILITY STANDARDS UPON EQUIPMENT MANUFACTURERS? To date the general attitude has been, with few exceptions, no. Attempts have met with strong lobbying opposition by the manufacturers and have usually been confined to the "too hard" basket. However, the onset of the "electronics revolution" in respect to domestic equipment is with us and the use of equipment undreamed of 20 years ago is becoming quite commonplace in the house. The EMC aspects of this equipment are going to be a headache without some effective legislation constraining manufacturers to compliance with basic and reasonable technical standards.

At present, and certainly in Australia, there are no compliance standards in respect of EMC aspects of such equipment.

In time, thanks to investment in marketing techniques and keeping up with the Jones, many thousands of items of non-compatible equipment will be in use in suburban areas and will, to a varying degree, be susceptible to trouble.

SO WHAT HAPPENS NOW? The manufacturer doesn't want to know. EMC does nothing to help his sales or profits — indeed it can adversely affect them. The consumer does not even think of EMC when he elects to buy a particular product. Having got it home his amplifier suddenly becomes a radio receiver. Who is to blame and who is responsible for the "nuisance" or "interference"? Naturally it isn't the manufacturer or retail supplier in the consumer's eyes. Therefore it must be the guy whose voice can be heard coming out of the loudspeakers.

WHO'S FAULT??

So, to the consumer, where does he seek his remedy. He can contact the source of "interference". As he is aggrieved, such an approach can vary from the mildly objectionable to the positively violent. Due to lack of understanding by the consumer he feels that his opponent must be in the wrong, particularly as the equipment has just cost so much money.

At this level, by the exercise of quiet diplomacy and the total co-operation of both parties, coupled perhaps with technical assistance from the Department of Communications or others, either the problem can be solved or a regime of mutual tolerance can be developed between both parties. If so, all is well and this is how most EMC problems are solved to date. We will consider cost later.

It sometimes happens that the consumer is not content with such an approach and seeks his remedy through litigation. There is no statute on which to base his complaint so the matter is usually considered under common law as applying to nuisance and the remedy sought is an injunction or damages against the "creator" of the "interference"

The Courts are ill-guided in this matter and experience has shown that many injunctions may be made against perfectly innocent people, quietly using equipment within the terms of their own licences and regulations. Such miscarriage of justice due to ignorance of the technicalities involved can only increase until the facts and consequences of EMC are properly and widely understood

WHO PAYS??

Earlier references were made to the costs of fixing the problem of ill-designed consumer equipment. By saving a few cents the manufacturer has created problems which may cost tens or even hundreds of dollars to solve to an adequate degree of satisfaction of the user. The manufacturer excuses his action by saying that the market will not stand the extra few cents of cost (or few cents reduction in profit per unit of production) and that in any case only a very small percentage of the units are going to be installed in a troublesome environment. This may well be true but for how long? So who pays the bill? This is usually settled by amicable agreement and expediency but very little recognition of true justice. Again, the real problem arises when one party, usually the complainer, is not prepared to be assisted or to recognize the technical liability arising from his ill-conceived choice of equipment and remedy is sought in law.

So it can be seen that EMC has social and legal significance which is bound to become worse with the electronics revolution unless adequate standards are defined and legal compliance is legislated for.

SPURIOUS COMPUTERS

In the United States the Federal Communications Commission has set standards for the spurious radiations from home computer equipment. The manufacturers naturally sought a stay of execution in respect of compliance. Imagine their reaction to a delay in compliance coupled with the mandatory condition that the equipment should be clearly marked to the effect that it was capable of creating interference, and as it was non-compliant with FCC regulations in this respect the liability for rectification of any interference caused by use of the equipment lies entirely with the user and all rectification costs are to his account. Not too many salesmen would draw attention to that condition!

What is needed is more mandatory recognition of the technical problems. There is no problem in setting and meeting the necessary technical standards. Making compliance with them mandatory by law is a wholly different problem and needs to be addressed by our legislators — sooner preferably than later when the situation has got out of hand. ■

The Value of a Smile

from "ARNS Bulletin", Sept. '81

From an old copy of GROUNDWAVE (Daytona Beach ARC)

It costs nothing but creates much.

It enriches those who receive, without impoverishing those who give.

It happens in a flash and the memory of it sometimes lasts forever

None are so rich that they can get along without it and none are so poor but are richer for its benefits.

It creates happiness in the home, fosters good will in a business and is the countersign of friends.

It is rest to the weary, daylight to the discouraged, sunshine to the sad and nature's best antidote for trouble.

Yet it cannot be bought, begged, borrowed, or stolen for it is something that is no earthly good to anybody until it is given away.

And if it ever happens that some of our brethren should be too tired to give you a smile may we ask that you leave one of your own.

For nobody needs a smile so much as those who have none left to give.

Have a Smiley Day

HOW'S DX

Ken J. McLachlan VK3AH
PO Box 39, Moorooibark 3138

Conditions generally have been good with some excellent openings on 10 metres to all continents, and with the little listening that I have done the Novice operators have had a ball. Fifteen metres has had its moments but good pickings were there to be had even for the CW operator if they could get past the Pacific Island station who holds "COURT" below 21 150 MHz on SSB with his "SUBJECTS" which comprise many VK calls with both Novice and Unrestricted priveleges.

It is time that amateurs who respect band plans and gentlemen's agreements joined forces and educated this presently minority group to the ethics of our hobby before it develops into a "CHICKEN BAND" area which is to be listened to by few and used by no one.

Twenty is its old reliable self and excellent signals are coming into the eastern States from the "early risers" in Europe on the long path.

HEARD ISLAND

For adequate coverage of Heard Island please refer page 18 where we have endeavoured to give a brief coverage of history, environment and amateur events, past, present and future. ■

ZD9

Tristan de Cunha/Gough Island is represented by ZD9BV. He irregularly appears on 20 metres generally at weekends — 16.00 to 17.00 UTC. ■

BY1PK

Doing good business when they are on 20 metres CW — understandably they DO NOT stay in the one spot for too long! But the equipment they are using is capable of THREE KILOWATTS to the antenna. ■

BEWARE 2 METRE JAMMERS

IF YOU WERE IN JORDAN YOU COULD COME TO A STICKY END.

Whilst on a recent visit to Los Angeles, King Hussein JY1 worked many local amateurs on 2 metre repeaters. During his QSOs there was some jamming as is typical of repeaters, but I don't think JY1 would have this problem in Jordan.

Jamming of radio repeaters by licensed amateurs in Jordan incurs a two year prison sentence and a fine. If communications are jammed by an unlicensed person the penalties are far worse.

WOULD THIS WORK IN VK????

SENEGAMBIA

Since Senegal and Gambia united to become one country on January 1, 1982, the amateurs have been relatively quiet, although C5s and 6Ws have been heard on the rare occasion.

There is the possibility that for DXCC purposes C5 and 6W will be deleted and one new country will be added to the DXCC list. This could be one of many changes in the next year or so.

US TRUST TERRITORIES

During 1982 many islands in the Pacific that belong to the US Trust Territories will become Commonwealths within the USA (as Puerto Rico). One which has elected to do this is the Mariana Islands which will be known as the Commonwealth of the North Marianas. Palau Island became the Republic of Palau last year and a new nation called the Federated States of Micronesia will come into reality. This will probably include the Marshall and Caroline Islands.

NO LEGAL ACTIVITY

Latest news from the Bangladesh Amateur Radio League is that the authorities have decided not to issue licences for the time being. This is a very unfortunate setback to amateurs world-wide and particularly those in S21-land.

Any station heard signing /S21 could be doing so without official consent and obtaining a card would therefore pose a problem.

MORE HLs?

It is believed that 1,783 people sat for the Amateur Qualification Test late last year and those that successfully passed will go on to undertake the CW test.

Therefore there may be more activity with that prefix in the near future.

OBJECTIONS TO AMATEURS

The IARU recently received a letter from the Ministry of Transport and Communications of the SOCIALIST REPUBLIC OF THE UNION OF BURMA asking them to communicate to ALL amateurs that radio communications from radio amateurs ALL over the world to ANY station in that country is strictly prohibited as NO amateur radio station has been licensed.

Therefore DF8../XZ are you genuine??

ABU AIL

They made it! And what a signal on 10 metres in the eastern States. This remote area, located in the Red Sea, has one building and that is the Lighthouse. If you were one of the lucky ones, and you would have to be if you depended on 20 and 15 metres for a QSO, then QSL to F6ATQ, QTH 1982 Call Book.

OY

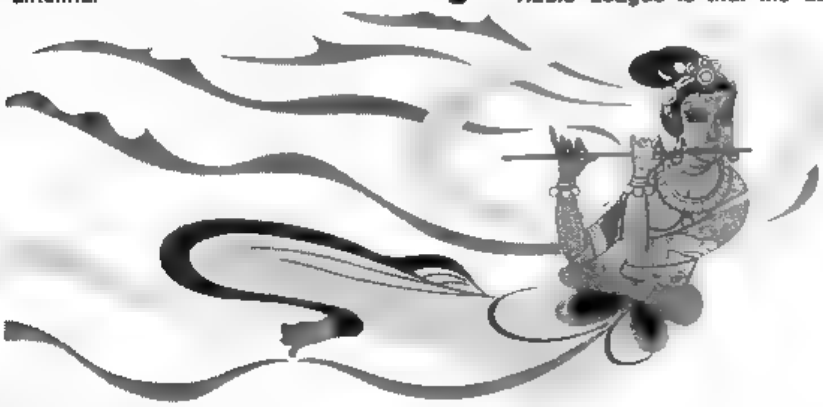
Anyone needing this prefix or the Faeroes for a new country then listen for OYs 5IB, 5ACQ, 5BTX, 5ENX, 5FUG, 5KMU and 7WI. QSLs to the home SM call (e.g. OY5ACQ = SM5ACQ).

They will be operating all bands on CW and SSB and are due to commence operations the first week of July.

5H3

Bjorn 5H3BH is settling down to life in Dar es Salaam and will be active on the bands until the end of 1983. Bjorn is a Management Consultant working with a Tanzanian company and he is engaged on a training programme to work with the Tanzanians and gradually be phased out as they become more familiar with foreign practices.

The station that he has set up comprises a FT101Z exciter into an FT2100Z feeding a TH3MK3 at 13 metres. Without spending too much time on the air in excess of 3,000 contacts have been enjoyed since December. WAS has been achieved and all confirmations have been received. Other amateurs such as 5H3AA, 5H3PA, 5H3KG and 5H3JR (Jack Rabbit), Father Chuck, to mention a few, are quite active on the bands.



For anyone wanting to set up a sked, the address is Bjorn Humble, PO Box 4358, Dar es Saleem, Tanzania. IRCs or a "greenie" would be appreciated to help defray escalating postal expenses. Via the bureau to the home call SM0EAI is another method for a QSL.

Unfortunately amateur "ADVERTISING" in the form of call signs on the envelopes to and from is discouraged, as is the case with many other countries.

DX SILENT KEY

It is sad to report that Soma 4S7YL/8Q7AC/VS9YL, a friendly lady that was known across all continents with broadcast quality modulation, became a Silent Key in early April after a period of illness resulting from a vehicle accident.

Soma, with the OM, Wick, and daughters, Luchmea and Chitra, did many tours of duty to 8Q7-land, Wick being the local engineer and Soma doing announcing duties at the studios of the regional broadcast station in Male.

Sincere condolences from all DXers are extended to Wick 4S7WA and family.

THE LONG PATH

Proof that the "postles get the mail thru".

I have received an envelope from VK6NE, sent to him from the German Democratic Republic and addressed to 388 Huntriss Road, Woodland 6018, his correct address but no country defined.

The letter, containing QSL cards, was posted in BARTH, GDR, on the 30th November 1981. It was received in USA postal district 60016. Posted again from DES PLAINES 60016 on the 7th December, then through their North Suburb USPO on the 10th December and on to Melbourne, where it was received on the 19th March, 1982, and finally to Perth, arriving on the 23rd March, 1982. Quite an eventful trip for a small envelope????

LATE QSL (or was the postage too dear)

Never give up on that wanted QSL.

Morrie VK3BZ recently went to his mail-box and received a pleasant surprise, for there was a QSL card for a contact he made on 29th August, 1932.

Accompanying the card was a letter from Leland Smith W5KL ex-W4AGI, explaining the delay. When Leland contacted Morrie on 40 metres in 1932 he was but a young teenager with very little money but much enthusiasm, so he wrote out the QSL but never saved the required amount to drop it in the mail-box.

Recently, he found the card along with another 19 VKs and ZLs which had also met the same fate, and upon checking the current call book Leland was thrilled to see that the call sign was still allotted to Morrie and he could rectify his "tardiness"

For old-timers that may have worked Leland W4AGI in the 1930s, he is still active on all bands, CW and SSB, under the call sign W5KL, and as he has been fully retired for 11 years he now has plenty of time to "rag-chew".

PROFILE G3NBC

Ken Hurrell G3NBC was born in London and lived for most of his life in and around that area and in the County of Essex until 1973, when he moved to Dorset.

All his working life has been spent in connection with radio/television and electronics, even when he spent a few years in the RAF in the early 1950s. Ken found the Air Force work extremely interesting as he was in the radio communications section of the Bomber Command and spent most of his time working on BIG transmitters.

Ken's interest in amateur radio has been with him for as long as he can remember (short memory) and he spent many years as an SWL before he took out the call sign "G3NBC" in September 1958.

On the first day he had his licence Ken was thrilled to work a K3 on 10 metres with his home-brew transmitter (45 watts of AM from an 807 in the final to a dipole antenna). The receiver was a Marconi CR100 converted to the amateur bands.

Ken G3NBC

Ken first worked into VK on 9th March, 1959, and that was on 15 metres with VK3VJ, the ultimate in DX working for those times. By this time Ken was using SSB with a home-made transmitter, a Heathkit receiver and a three band quad.

In 1969 Ken rebuilt his transmitter to use a pair of TT21s, which gave a peak output of 300 watts and fitted into a 6 ft. metal cabinet, a rig that he was so proud of that he still has it tucked away in a cupboard in case he may need it.

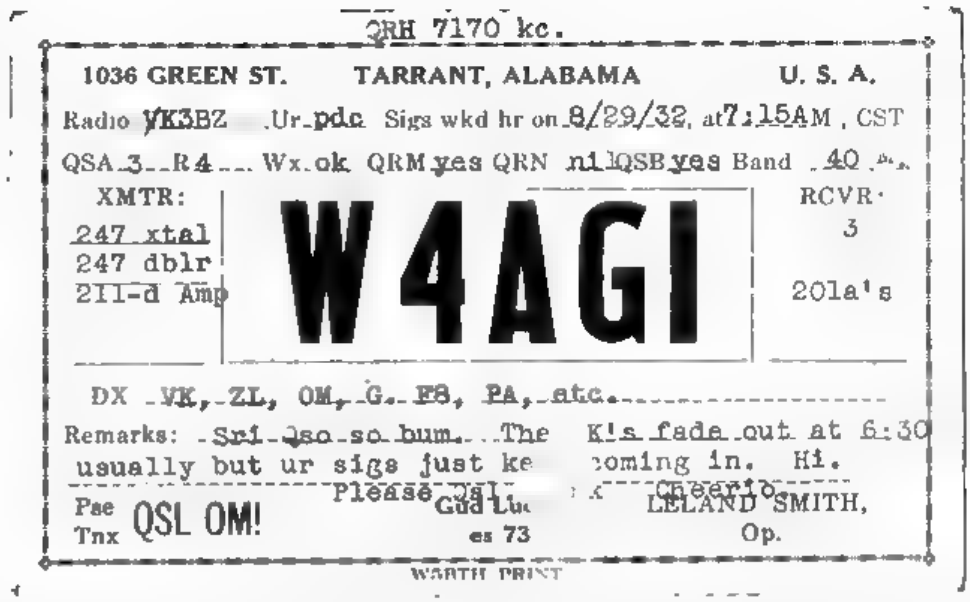
Ken is very keen to work 'that new one" and his current DX score is 322 with 4 not yet confirmed. Ken is very ably supported and assisted in his hobby by his XYL, Kitty. Kitty is also very interested in listening to the radio, but as it is against regulations in G-land, she is unable to talk with Ken and as yet she has not tried for a licence.

Ken has been a member of the RSGB for 24 years and was certificate manager for the RSGB in the 1960s, but had to give it up as there was not enough time for his other hobbies of collecting stamps, home decorating and amateur astronomy. When Kitty is not keeping Ken company at the controls she keeps herself out of mischief with either her embroidery, tapestry or painting.

Ken's current equipment is an FT101ZD, FL2100 to a Mosley 3 element Mustang on top of a tilt-over mast at 45 feet.

The area in which they live in Dorset is very ancient with remains from the time of the Roman occupation and prehistoric times, although the village of Marnhull where they live was originally an Iron Age settlement.

Kitty



QRH 7170 kc.

1036 GREEN ST. TARRANT, ALABAMA U. S. A.

Radio VK3BZ Ur rpt Sigs wkd hr on 8/29/32, at 7:15AM, CST

QSA 3 R4 Wx ok QRM yes QRN nil QSB yes Band 40 M.

XMTR: 247 xtal 247 dblr 211-d Amp

W4AGI

RCVR: 3 20la's

DX VK, ZL, OM, G, F8, PA, etc.

Remarks: Sri Qso so bum. The K's fade out at 6:30 usually but ur sigs just ke coming in. Hi. Please Qsl. Cheerio.

Pse Tnx QSL OM! Gud Lu es 73

LELAND SMITH, Op.

WARTH PRINT

YL INFLUX?
Comparison between the 1980 Foreign Call Book and the recent 1982 edition show an increase from 101 to 432 licensees in the Falklands Islands VP8. Though a thorough check has not been done YLs are predominant and for a population of some 1,800 it would have to be the most amateur orientated area in the world and take the prize for the most YLs in any one prefix.

Anyone with the Call Books, time and inclination may care to do some research for interested readers. Any volunteers?

VATICAN AWARD
Due to reasons unknown, the Vatican City Special Award dates for contacts has been extended until the 30th of June this year. As a starter for those wanting a qualifying QSO with HV3SJ, he can frequently be found 10 kHz above the International Pacific DX net when I am NC on a Tuesday, and with Luigi I0LLZ drumming up business for them on the Pacific DX net frequency they are kept busy, and I am driven crazy.

TRINDADE
Another attempt will be made this month by all reports, so sit back and wait hoping that everything fits into place for them this time.

CHOPPER HOPPER
From unconfirmed rumours and "reading the mail" on 20 metres, indications are that a well known VK amateur, electronics parts manufacturer, importer, film maker and explorer will be visiting many countries in the next couple of months and the main method of transport will be by helicopter. From previous experience it is guaranteed that this exploit will receive vast media coverage as other expeditions have.

SMOM
Much wanted and it stands for the Sovereign Military Order of Malta. It is a fully independent entity which was founded in 1099, from 1310 to 1522 had the sovereignty of Rhodes and from 1530 to 1798 was located on the island of Malta.

Established in Rome in 1834, where it now holds several extra-territorial areas. This Order is represented in Australia by the St. John's Ambulance organisation. For further details work the country, as a lot of further information is on the card. QSL to Mario I0MGM, Call Book QTH.

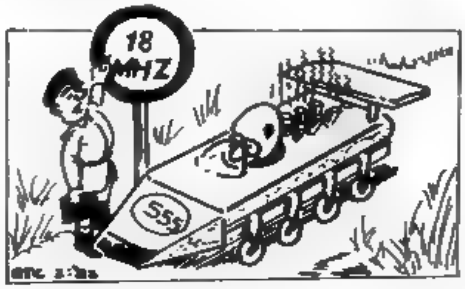
T32
WA6VNR and WB0BNR will be operational from T32-land from the 15th to the 24th of this month. Operational on all bands 10-160 metres on both CW and SSB with perhaps a try on SIX METRES. Good luck.

Assistance and information that have made these notes possible have come from Region 3 News, World Radio, QST, QTC, RSGB magazines and amateurs, including G3NBC, JY3ZH, ON7WW, VKs 2DXH, 3BZ, 3UX, 3DFD, 4AIF, 6HD, 6IH, 6NE, 6XI and Eric L30042. ■

SSB WORKED ON THE EAST COAST
10 Metres:
3V8JYC, 5Z4CM, J20Z, WB0MKR/KH3
15 Metres:
5N9ACO/8, 9Y5ONP, FH8OM, FR0GGL, GJ6UW, H44AP, SV1EX.

20 Metres:
4U1ITU, 5B4JE, 5H3BH, 5V7RE, 5Z4CF, 8P6AH, 9Q5MA, 9Y50NP, A22BW, A71AA, AH2L, CE0ZAD, DL2VK, FM7WE, FO8IW, FR7ZN, HS1ALP, J20Z, JX5VAA, KP2A/KP1, KV4AA, OX3ZM, OY5NS, TA1MB, TF3A, TL8CK, UG6GAF, VE1AI/1, VK9NM/LH, VP2MO, VQ9CW, WS8TH/KH8, WB0MKR/KH3, WD9CDU, XT2AU, XZ9A, YO3QK, ZB2J, ZD9BV, ZK1CG.

21 Metres:
CE7NR, CO7AM,FR0FLO GB4DX, GB4GS, GU3KFT, TI2LLL, VP5BAM, 6Y5HN, AP2KS, CP6EL, EM0ZC, RP2BCV, VP2MGG, VS6EL, VS6JW, VS6KV
CW WORKED ON THE EAST COAST
21 Metres:
KC6DZ, OE5BS/5N7
28 Metres:
A4XIZ, KC6DZ, VC3JEV, VS6EY
QSLers OF THE MONTH — VK4
5N0WRA, 9M2HZ, C21NI, EC1MC, EC6DI, EC8DP, HK0BKX, HZ1AB, KC6DX, KC6DY, SP9CDA, SV0AA, T2VEL, VU2RA, VU2SGR, W5VFO/HC7, W9DCN/C6A, XF4MDX, ZB2EO, ZK2EL, ZK2TA.
QSLers OF THE MONTH TO SWLs
8Q7BD, 9Y4KG, DJ1US/ST3, FO8IK, G3GNR (10 MHz), G8FR (10 MHz), GD4BEG, GU4CHY, HB0ALO, HL1CX, KA6HIQ/KH3, P29PS, T3AT, TF3YH, VK9XT, VK9YT, XE2XW, Y48YL, ZS2CR.
SSB WORKED ON THE WEST COAST ON 10 METRES
5H3DM, 7P8BX, 7Q7LW, 9U5WR, 9X5PP, A92F, C53CL, EP2TY, FB8WG, J20Z, JW6IJ, JY3ZH, OD5AW, TN8AJ TR8BJ
SSB WORKED ON THE WEST COAST
1.8/CW: EI9J, SM6EHY, SM7BIC, UK2RDX, UQ2PQ, VK9YC, ZS5LB
1.8/SSB: G3RTY
21/CW: DJ6SI/3X, KP2A/KP1
21/SSB: 6Y5HN, VP2EC
28/CW: DJ6SI/3X, FB8WG
3.5/CW: GI3IVJ, T30AT, UL7CAD, ZK1CQ, ZM7VU, ZS5LB
3.5/SSB: A22BW
7/CW: GI3OQR, OY7ML, TN8AJ.
CW LISTENING WITH ERIC L3-0042
80 Metres:
HA4XT, UA1DZ, UA0LCZ, UK5IBB
40 Metres:
EA1QT, FG0QT, FG0DYM/FS, GI3OQR, GW3AX, HK3YH, HK0BKX, KG6RT, KP2A/KP1, OK1TN, ON5NT, SM7ALC, UK2GDZ, UO5OGK, VK9NM/LH, VP8ANT, YU2CBM, ZK1CQ, ZL4PO/C, ZM7VU, YV4BOU, 8P6AU
30 Metres.
DL6NB, EL0BY/MM, GB2RN, GD4BEG, GW3AHN, F5ELA, HB9CJC, JA5DQH, JA5CKJ/3, OE6RH, OK1DAV, OZ1LO, PA0CQ, DL2GG/YV5, ZM7VU, 5Z4CY
20 Metres:
EA6DI, FR7BX, FR8JCM, HI8LC, HP1AC, HS7AID, JT1KAA, KC6DZ, P29RH, SV1NC, T30AT, UD6AI, V2AU, VS6EN, YT3L, ZB2EO, ZM7VU, 4S7MX, 4U1ITU, 4X4XX
17 Metres:
DL7HZ, ZM7VU.



15 Metres:
BY1PK, EA6FV, FO8IW, HC4BB, HP1XZK, HS1ANM, UL7XE, VS6CF, VK9YC, XE2ACG, YC5AR, ZK1CQ, ZM7VU, ZS6ME, ZS6ANL/3D6, 3B8CF, 5W1AB.
10 Metres:
A4XJP, CR8UT, I6ZOO. JO1BMV, KC6DZ, OE1EHB/YK, UD6DNJ, UK9HAC, VQ9CW, VS6EY, VU2VTM, XE1CM, YB3DC, YV1DTL, ZK1CQ, ZS1ZQ, 3B8CF, 4X4FA, 5Z4CM, 8J5SUN.

Faces Behind the Key and Microphone


Steve EA9JV


George VE1CAW


John KA2BYC


Ignacio EA2IA

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IC2A 2m Handheld 15W .	$309	FT208R 2m Handheld 2W	[illegible]	TR7800 70 cm Transceiver	$435
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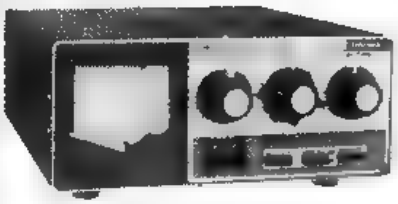

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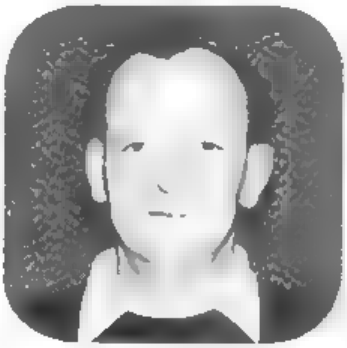

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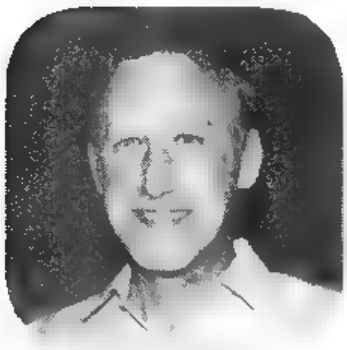

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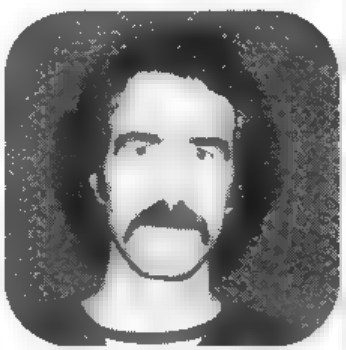

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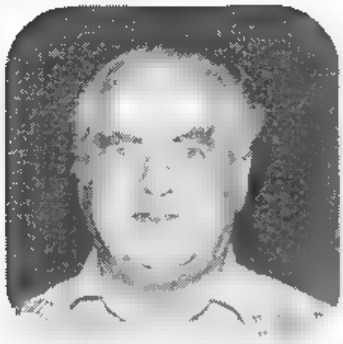

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ONVENTION

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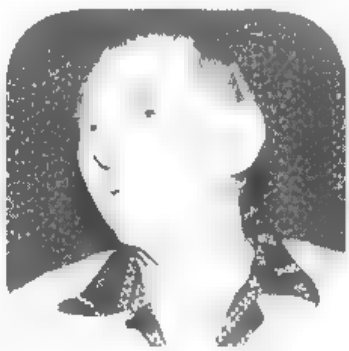
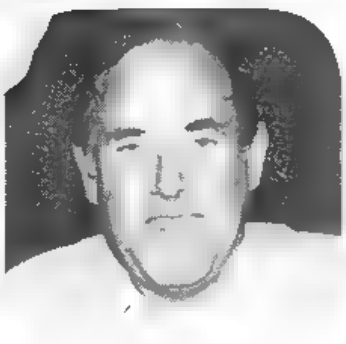
Earl Russell VK3BER
Federal Councillor



Peter Dodd VK3CIF
Secretary/Manager

Ron Henderson VK1RH
Federal Councillor



Tim Mills VK2ZTM
Federal Councillor

Harold Hepburn VK3AFQ
Federal Executive

David Laurie VK4DT
Federal Councillor

Photographs and Processing Courtesy of Dave Shaw VK3DHF

LISTENING AROUND

Joe Baker VK2BJX
Box 2121, Mildura, Vic. 3500

"NIP O' WHISKY"

There's at least one New Zealander who doesn't like the sheep that they have over there. When Alan (W6UBM) of North Hollywood asked Fred (ZL1ACP) on "ten" one day if he had anything to do with New Zealand sheep farming Fred was heard to reply "No — I hate the stinking things", which wasn't exactly a good advertisement for New Zealand's "baa-baas".

Anyway, then Alan told Fred of how, many years ago, he had a friend who had 10,000 sheep somewhere in California and, just after shearing, up came a cold snap which resulted in many of the sheep contacting pneumonia. So, in order to save as many as he could the friend gave all the baa-baas a nip of whisky, and he reckoned that because of this about half the flock were saved. So there's an idea for some of you mainland sheep cockies — when the weather suddenly turns sour, give them a nip of Scotch.

A NEW RECRUIT??

A visitor to my QTH a few days ago was Bill McKinnon, a former resident of Mount Gambier and now living in Mildura. Bill is not an amateur, but is interested in radio, so on the night I put him up here, I decided to give him a practical demo on what amateur radio is all about. On "80" I introduced him to many of the regular night owls, but was particularly pleased to hook up with Leo (VK5GJ), seeing that Bill formerly lived where Leo lives. Bill and Leo had a great time reminiscing about the Mount, and people that were known to them both.

On the following morning I decided to let Bill hear some of the more distant stations and fired up on "TEN" on my converted Kraco. Soon we linked up with Art AA6A, of Petaluma, 40 miles north of San Francisco, and 20 miles from the ocean. Art was using an Icom 720 with a four element beam aimed right on Australia, and the most that I could offer was my very, very QRP signal squirted in Art's direction from my 27 feet high three element beam. Art had difficulty in even copying my call sign, but the fact that I could contact America duly impressed my visitor, who could hear Art quite well. Art had trouble copying the "Victor Kilo Two Bravo Juliet" bit — especially the "Bravo", so I decided to throw that phonetic overboard and when I substituted "Boston" he got it quite well. Lesson to be learned here I think is that because of our Aussie strine, it might sometimes be wiser to use a place-name more easily recognisable by the chap on the other end.

HOW OLD ARE CALCULATORS?

Had a word or two with Sue VK5AYL the other night — or rather, early the other morning. Sue has left her job with ABC-TV in Adelaide and she is now studying electronic engineering. She was preparing an essay on the early history of computers or calculators, and she told me that her research has revealed that the first calculators were in use hundreds of years before the birth of Christ. She said that they used a system of gears to predict the position of planets. She spoke about the early ILYAC and UNIVAC computers, and said that one with 18,000 valves was used in World War Two for some very hush-hush ballistics work. SHE SAID THAT ALL OF THE WIRING FOR THE 18,000 VALVES WAS DONE BY WOMEN. Good luck, Sue, with your studies, and I'm certain that the good wishes of all who read this will go with you also.

TEN METRES

Reverting back to my earlier mention of ten metres, which has been pretty good during March. Even with a humble QRP of approximately 14 watts PEP from the converted Kraco, I was able to have a word with Tom, a student of the Indian Institute of Technology at Madras. Tom was using the club station VU2NCS with only 40 watts into a long wire aimed towards Aussie, and I heard him work stations right across this continent from Perth to Canberra, and he was really having a ball.

ODD PLACES

Why do those VK6s often have difficult place names. There's a chap named Terry VK6NTM who lives on wheat and sheep farm at WYALKATCHEM, 100 miles east of Perth. Terry's brother, aged 24, is off to Antarctica soon. Not a bad place to be, I suppose, in hot weather, but I don't think I'd care to be there in winter.

WATER WORTH

What is it that they have on Sydney Harbour (besides THAT coathanger and Opera House)? Is it a hydrofoil or an aerofoil? Apparently there is a fine distinction and Gordon VK5HM knows the answer. Anyway, be it hydrofoil or aerofoil (who cares), apparently it has long since replaced many of the ferries that, as a child born in Sydney, I remember from all those years ago. Got talking (as I usually do in the wee small hours) to Gordon about the joys of trips on Sydney Harbour (there's nothing to equal it anywhere else in the world) and Gordon told me that those posts to which they attach the ferries at Circular Quay were not hitching posts or mooring posts, but BOLLARDS. Ah well, I'm learning all the time. Want to know anything about anything? If so, ask Gordon. He's got all the answers tabbed, and he's a pretty clucy bloke, too. But don't fall asleep between overs, Gordon! Leave that to me to do! That's My privilege!

Ahoy there any of you ex-Navy types reading this. Ted W6SRP near LA in California was heard at Buronga, and told me that he had a friend, Alan, in the shack, and they wanted to know if I was anywhere near Perth in Western Australia! Told that I was well over a thousand miles east of Perth, he was somewhat disappointed. It appears that Ted and Alan have some buddies over Perth way, and they were anxious to hook up with them. So if any of you Perth fellers know these Californian Navy types, of course — go to it, man!

On the observation deck at Tullamarine Airport. Left to right: Don VK3VPW and XYL Uter, Olwyn and Des VK3BSB.

TO THE AIRPORT

Just before Christmas I was a guest at the home of Don VK3VPW and his wife, at Narre Warren, and while there we went into Melbourne to meet Des (VK3BSB, of Paynesville, Gippsland) and his wife, who were about to leave for the Apple Isle for a short holiday. We then headed for Tullamarine Airport, only to find that the departure time for Des's plane had been put forward by a couple of hours, so we eventually QSY'd to the airport lounge with a liberal supply of 807s to help us pass the time. We found time also to take some photos and these were taken on the observation platform. Des was well equipped electronically for the trip, and in the days that followed we kept in touch with him while he was touring. The picture shows a happy foursome, just before take-off. It would have been a happy fivesome, but for the fact that yours truly was the one behind the camera.

OLD-TIMER

On "ten" the other day I heard ZL1VL in contact with VK2VYI. No handles were heard while I was listening. The New

Zealander was coming in quite well but little or nothing from the VK2, who probably was beaming straight towards ZL and away from me. I heard ZL1VL say that he was all of 85 summers and that he's been licensed for 52 years. Any takers to beat that record? Why, even Gordon (VK5HM) has only been on the air since 1934. ZL1VL is also an ex pilot and he finds now that the digital readout on his gear is a great help to those well on in years.

The low frequency end of "80" is not the only part of that band on which the brass pounders can be heard. Leastways, a couple of times recently in the wee small hours I've heard some pretty slick CW operators on the high end of 80, VK2s I think. And they were ripping along at about 30 w.p.m. or more, which is much too fast for me to keep up with. Anyway, it was great fun trying to read these two very experienced operators. The top of 80 is usually occupied at this time by stations trying for the South Africans.

73s to all.

Joe VK2BJX. ■

EMC

(Electro Magnetic Compatibility)

If radio frequency interference is causing you a problem you are reminded that — "Advice on all types and aspects of interference (PLI, TVI, AFI, etc.) is available from the National EMC Advisory Service".

FORWARD DETAILS TO

VK3QQ,
Federal EMC Co-ordinator, QTHR.

Far Reaching Net

On the 25th of each month amateur radio enthusiasts Australia-wide, all employed by Comalco, meet on-air to discuss aspects of their work, leisure activities and radio. It is a net which had very humble beginnings when Kevin Whittaker from Bell Bay (Tas.) Smelter was on holidays in Weipa (Qld.) and wanted to contact a friend back home. He used Weipa Safety Officer, Dale McCarthy's equipment and was able to contact Bell Bay Metallurgist, Norm Thorley.

This contact led to further contact between the two operations centres, with Dale, Arthur Stead of Survey and Alan O'Connor of Communications joining in.

The Comalco Net developed from this and each month employees from Bell Bay, Weipa, Thomastown Research Centre and C.R.A., Melbourne, all take part and they are hoping that employee amateurs from Yennora, Tiwai Point, N.Z., and other Comalco centres will soon join in.

Radio enthusiasts not employed by Comalco have shown interest from as far away as London and regular contact is made with the Radio Officer on the "Curtis Oceanic" and also an engineer on an ore carrier which travels between Gladstone and New Zealand.

Further information about this net may be obtained from Dale VK4KDM or Norm VK7KTN, both QTHR.

Arthur, Alan and Dale pictured at Dale's house on Comalco Network Night, January 1982.

Norfolk Island Holiday

During March this year, armed with a bag (which the XYL thought contained fishing gear) "choc-a-block" with a 120V Kenwood, linear and helicals for 3.5, 7, 14, 21 and 28 MHz, John VK2AMV spent a very enjoyable five days holiday on Norfolk Island.

As the XYL hates radio John had a limited amount of time on air but he hired a small car and worked 30 different countries and 203 contacts whilst mobile on all bands.

John has been licensed since 1949 and is still very keen. He says that Norfolk Island is 5 miles long and 3 miles wide and an extremely enjoyable place to go for a holiday and particularly work DX. ■

John's QSL card showing John, hire car and picturesque scenery.

:: ::

At today's prices_ it's OK to cry over spilled milk.

VK2 MINI BULLETIN

Athol Tilley VK2BAD
P.O. Box 123, St. Leonards, NSW 2065

COUNCIL REPORT
The 1982-83 Divisional Council met for the first time on the 16th of April and appointed the following office-bearers —

Divisional President Susan Brown VK2BSB.

Secretary. Athol Tilley VK2BAD.

Treasurer. Gordon McDonald VK2ZAB.

Vice-Presidents: Tim Mills VK2ZTM and Stephen Pall VK2PS.

Affiliated Clubs and WICEN Liaison: Peter Jeremy VK2PJ.

Education Service: Stephen Pall VK2PS.

New Membership: Gordon McDonald VK2ZAB.

The positions of Repeater Committee Chairman, WIC Property Officer and Publications are held by Tim Mills VK2ZTM.

Dural Officer-in-Charge and Broadcast Officer: Jeff Pages VK2BYY

QSL Liaison: Susan Brown VK2BSB.

AR VK2 Sub-Editor: Athol Tilley VK2BAD.

Other positions include—Library Officer: Bill Hayes VK2AJL. Course Supervisor: Cec Bardwell VK2IR Intruder Watch Co-ordinator. Bill Martin VK2EBM. Co-ordinator for the Disabled. Jim Saunders VK2BNY. State WICEN Co-ordinator: David MacKay VK2ZMZ. Honorary Solicitor: Fred Herron VK2BHE.

The positions of Slow Morse Co-ordinator and AR Publicity Officer for VK2 have been filled and will be confirmed at the May Council meeting.

EDUCATION SERVICE COMMITTEE
Ken Hargreaves VK2AKH, Ian O'Toole VK2ZIO, Les Dickenson VK2DNS, Dave Wilson VK2ZCA, Ian Hook, Martin Lansdowne, Kurt Welzel VK2GQ, Bro. Peter Connoly, Mrs. D. Browne, Stephen Pall VK2PS.

WICEN COMMITTEE
Mike Richter VK2BMM, Syd Griffiths VK2AHF, Eric van de Weyer VK2KUR, Christo Simeonoff VK2ZAX, Fred Parker VK2ZBK, Ian Nance VK2BIN, Alan Boxsell VK2YEQ.

DURAL COMMITTEE
Jeff Pages VK2BYY, Roger Henly VK2ZIG, Charly Walker VK2BXX, David Walters VK2AYO, Colin McKinnon VK2DYM, Phil Cole VK2BQC

STATE REPEATER COMMITTEE
Gordon McDonald VK2ZAB, Michael Goard VK2ZNV, Jill Rowling VK2DLY, Henry Lundell VK2ZHE, Paul Smith VK2ZSA.

CHANGE OF ADDRESS?
Consideration was given to the motion carried at the recent AGM recommending that Council purchase a suitable commercial property in the Parramatta area as future Divisional headquarters and sell the Atchison Street property. Stephen Pall and Susan Brown were appointed as Council representatives in negotiations and they will obtain firm quotes for the purchase of Atchison Street for consideration by Divisional Council.

PRIZES
Publications were donated as prizes to the Urunga Convention and Council resolved that this Division would donate up to $25 worth of publications to affiliated clubs requesting prizes for field days.

CONVENTION
Federal Councillor Tim Mills VK2ZTM and Alternate Federal Councillor Wally Watkins VK2DEW presented and discussed agenda items for the WIA Federal Convention. They noted Council's views on the various items as a guide to their vote at the Convention.

CALLBACKS
Broadcast Officer Jeff Pages reported that one request had been received for full callbacks to be taken on 10 metres after broadcasts. Council decided that the existing system of callbacks involving call signs only continue, due to the considerable time required for personalised callbacks on all frequencies. The meeting closed at 11.16 p.m.

AMATEUR RADIO TO THE RESCUE
On the 16th of April a car overturned several times near the QTH of Peter VK2TK. Driving quickly to the scene, Peter found one passenger (without seat belt) had been thrown onto the road and was suffering extensive facial lacerations and broken fingers, the other occupants being mainly uninjured. Peter called for assistance on repeater 6650 (Mt. Bindo) and Ross VK2BRC replied almost immediately. Ross passed the request on for Police and Ambulance services to Bathurst Police.

Bruce VK2FD took over communications and phoned the relatives of those persons involved in the accident.

Peter is to be commended for his quick action in establishing protection at the accident site, tending to the injured person and requesting assistance. It is of note that all amateurs involved were members of WICEN.

Do **YOU** know your procedures well enough to operate calmly, efficiently and effectively in an emergency?

Submitted by Ross VK2BRC.

WICEN AT BATHURST
Communications at the Easter 1982 motorcycle races were again provided by members of WICEN and the SES. Net control was based in a 12 metre caravan with three VHF frequencies and 27.240 MHz being available.

Prompt communication of information greatly assisted the marshalls and race organisers, in one instance allowing an immediate decision to stop the race preventing further collisions following a serious accident.

Fourteeen amateurs took part, including Jan VK2KGH, Neville VK2DR, Martyn VK2DLD, Wally VK2DEW, Frank VK2ZFE, Kim VK2ASY, Peter VK2TK, Jack VK2DDN, Barry VK2DBA, Chris VK2PNI, John VK2BHM, Ross VK2BRC, Peter VK2KBP, Gerald VK2BFR

In all, 585 messages were handled and for the first time the organisers were less worried about having sufficient people to man check points.

Submitted by Ross VK2BRC.

DETAILS OF TWO CLUBS AFFILIATED WITH THE NSW DIVISION:

Novice ARG of NSW
17 Bamfield Avenue, Yagoona 2199.

Net: Tuesdays at 2000 EST on 28.385 MHz using VK2NAZ.

Meetings: 14 Atchison Street, Crows Nest, Saturday, from 1 to 4 p.m. EST.

President: John VK2PBW. Vice-President: Stuart VK2ADE. Secretary: Dennis VK2KVW. Others: Michael VK2EPM, Winstone VK2KWV, Jim VK2NBY.

Magazine: "NARG NEWSLETTER", bi-monthly Editor: Michael VK2EPM.

Castle Hill RSL ARC
C/- 16 Mills Road, Glenhaven 2154.

Meetings: 1st Wednesday of month at 8 p.m. at Castle Hill RSL Club.

President: Bob VK2VKP/YVO. Vice-President: Karl VK2PLT. Secretary: Colin VK2DYM. Other: Colin VK2ZIO.

Classes: NAOCP each Tuesday at 8 p.m. at Castle Hill RSL.

NSW members and clubs are invited to submit news for inclusion in this column to PO Box 123, St. Leonards 2065. News for August AR should reach us by 20th July.

Athol Tilley VK2BAD. ■

A Definition of Resistance in Series.

VK4 WIA NOTES

K. B. Pounsett VK4QY
33 Lasseter Street, Kedron, Qld. 4031

WORKSHOP

The 1982 Radio Club Workshop of the Queensland Division was held over the weekend of 17th and 18th April at Griffith University in Brisbane. This gathering of Council members and delegates from 20 clubs throughout the State (from Brisbane to Cairns, to Mt. Isa) was an unqualified success

The workshop acts as a meeting place and a forum for a wide cross section of the 1,250 or so VK4 amateurs who are members of the Institute Club motions were presented to the workshop, some gained favour, some were rejected. Motions for the 1982 Federal Convention were discussed at length, leaving no doubts in the minds of the Federal Councillor and his assistant as to the thinking of VK4 members in regard to these. The delegates were divided into working committees to formulate suggested WIA policy on a number of important subjects.

POLICIES

From these working groups a number of valuable policy statements emerged and these will be presented to Federal Executive. Some of the subjects covered were Education, Intruder Watch, Third Party Traffic, Gentlemen's Agreements, EMC, History, WICEN, Public Relations, Novice Licensing, Examinations.

M.H.R.

Again this year Council and delegates welcomed Mr. David Jull, MHR, member for Bowman, who is chairman of the Government's Backbenchers Committee for Communications. Mr. Jull had been given a number of questions a short time before the meeting and had very kindly obtained answers from Mr. M. R. Ramsay, First Assistant Secretary of the Radio Frequency Management Division of the Department of Communications. The questions related to a number of matters of interest, including Government action on Intruder Watch reports, Harmful Interference, the publication of the new Australian Table of Frequency Allocations, the new Radio Communications Act, log-keeping, Phone patching.

A copy of the questions and the answers will be forwarded to the Editor and may appear in AR in due course.

A lively discussion with Mr. Jull brought out some very interesting points, one being that there are two backbench committees, one on each side of the House. The purpose of the Government committee is to bring to the notice of the Minister for Communications such matters which it deems necessary. The committee acts in an advisory capacity to the Minister and as a gauge of public opinion. Another point worth bearing in mind is that members of Parliament do take a lot of heed when constituents write letters, especially when they are bombarded by letters.

The Queensland Division is indeed fortunate in having such a good friend as the Honorable Member for Bowman (a Queensland electorate) and we extend our most sincere thanks for the friendly way in which he gives us some of his valuable time each year. Our thanks also go to Mr. Jull for his efforts on our behalf at other times.

A very large amount of work went into making the 1982 Radio Club Workshop such an outstanding success; many people were involved to a greater or lesser extent and they know how much their efforts are appreciated. One name must be mentioned, a lady who put all she had into our Workshop and thoroughly earned a special mention, Anne Minter VK4NRA. Thanks, Annie. ■

Third Party Traffic

The following procedures are recommended by Council as forming a suitable basis for amateurs wishing to participate in third party traffic handling nets whether established on a regular basis or for specific emergencies.

1. These procedures apply only up to the stage of an emergency being declared and do not involve official WICEN organisation
2. Messages to be handled should be of a compassionate nature, e.g. reports of hospitalisation, funerals, deaths, births, etc Individual cases should be considered on their merits at the time.
3. The originator of the message should be advised that messages are handled in good faith and that no guarantee of delivery can be made.
4. Transmission of commercial messages is strictly forbidden.
5. Clubs are encouraged to form a committee within the Club to prepare contingency plans for involvement.
6. Liaison with local police stations is essential, particularly when distressing messages are involved.
7. At an appropriate time the individual amateur or Club should advise necessary organisations of available facilities and capabilities.
8. Messages of a distressing nature, e.g. notification of death, should be authenticated if possible by the originating station.
9. Stations participating in third party traffic handling should at all times operate within the terms of their licences and adhere to DOC regulations.

From QTC VK4 AR insert, February, 1982. ■

AM's Demise

from "DX Post", Feb. ■

Am broadcasting stations are going down hill rapidly with their financial status in the US of A. This fact can be gained by looking at statistics. A good example is KPOI-AM and its KDUK-FM affiliate. The FM station out billed the AM $86,000 to $30,000 in the last financial year. Indeed, the manager of Broadcast Services in Hawaii has strongly suggested that his AM only clients get an FM affiliate else they will most likely go out the door backwards.

The reasons for AM radio finding itself in so much trouble are mainly: FM, its competitor, can provide a clear, crisp sterio sound whereas AM is cramped to 8 kHz and is subject to parasitics. FM is taking out the top ratings in the major markets and leaving the talk shows for AM. AM operators have a new weapon in the battle to cut overheads and that is the communications satellite. Networks from satellite fed programmes are springing up all over.

A recent operator to take the satellite way out has been KCNL in Homer, Alaska. Penninsula Communications, the operator of KCNL-AM and KGTL-FM are feeding the FM operation with computer controlled "beautiful music" tapes. The AM operation is fed by the Christian Broadcasting Networks (CBN) "Continental Radio" from Virginia Beach, Virginia over SATCOM III. CBN's Continental Radio is a total package of 24 hours a day, news, weather and adult contemporary music with a Christian flavour. No programme director or announcer need be at the local station and only a technician is needed to load the cartridge machines with local id's and commercial spots. The master control at Continental Radio sends out a 25 Hz pulse over the satellite to start the cartridge machine when a local id is required. If there is no cartridge in the machine, music goes out anyway so there is no break in the programming. This system cuts down markedly on overheads (also puts programme managers and announcers out of work). Time checks over the Continental Radio network aren't that good. They announce "xx minutes after the hour" or "xx minutes before the hour" the actual hour is not given! Is this any way to run a radio station? Some operators obviously think so. The AM stations will no doubt lose out even more due to non-localisation and lack of listeners.

Should you think all of the above is applicable only to the USA then you are mistaken. Latest Australian statistics given out by the Broadcasting Tribunal show that AM operators here are losing in a big way, too. Last year fourteen metropolitan stations and twenty-two country stations reported losses.

EDUCATION NOTES

Brenda Edmonds VK3KT
56 Baden Powell Drive, Frankston 3199

BOOKS

This month I would like to comment on books for use by intending examinees.

There are several books of sample questions. These are a useful resource if used simply as a question bank, but cannot be considered as textbooks unless there are good explanations of the answers.

Two new books have appeared recently.

INTO ELECTRONICS

Into Electronics, produced by the VK2 Division of the WIA, is a revised version of the old YRS notes. It is a well prepared and laid out publication with clear diagrams, simple explanations and an easy-to-read text. The main emphasis is on Electronics rather than radio, though, so it cannot be considered a full novice text. Of 19 chapters (about 90 pages), all is "basics" except the three chapter (18 pages) devoted to Receivers, Propagation and Test Equipment. There are no chapters on Power Supplies, Transmitters, Modulation or Interference. If these topics are included in a future Part 2, it will provide an ideal starting text for intending novices. I would also like to see included an index, some safety notes, a little on vacuum tubes and some multi-choice questions.

THE NOVICE OPERATORS THEORY HANDBOOK

The Novice Operators Theory Handbook, recently produced by Graeme Scott and Sandy Brucesmith, should have wide application as a text, both for classes and for students working on their own. It has been written specifically for the novice syllabus, and adheres closely to it, both in organisation and degree of depth — although in a few places it includes material above novice level. It is liberally, perhaps oversupplied with diagrams, to the extent where the thread of the text may be lost while finding the relevant diagram, but on the whole it is easy to read and the explanations are good, as is the artwork. The sample questions seem well written and appropriate.

One disadvantage is that, in keeping the book small, the pages have become crowded and the print small — not a recommendation to the more elderly novice who would appreciate larger print.

Again I would like to see the next edition with a reference index and some safety notes — perhaps instead of the large section on circuit symbols. On the whole this book should fill a long felt gap.

RSGB RADIO AMATEURS EXAMINATION MANUAL

A new edition of the RSGB Radio Amateurs' Examination Manual, by G. L. Benbow, makes it more useful for Australian conditions by the inclusion of multi-choice questions. Most sections have been expanded slightly, and some new diagrams added. It is above our novice level — almost to AOCP standard, but as with most RSGB publications the presentation is of a high standard, with clear explanations, easy to follow diagrams and chapter headings on each page. However, there is still no index, vacuum tubes have disappeared, and the terms "skip zone" and "skip distance" are used as interchangeable. The appendix sections on syllabus and objectives will be of interest to class leaders and those on operating procedures and tackling the exam should be read by all students.

Overall it is a very useful book for someone intending to go on to a full licence after achieving novice standard.

RADIO AMATEURS EXAMINATION REVISION NOTES

Another RSGB publication which I have found valuable is the Radio Amateurs Examination Revision Notes — again by G. L. Benbow. This is a pocket sized publication crammed with vital information — the sort of thing you would get if you summarised the class notes down to a minimum. It is ideal for carrying for spare time study or general reference — but I have not seen it on sale for years. If you see it, grab it — and please let me know where you found it.

THE HAM EXAM CRAM BOOK

The Ham Exam Cram book, by I. Botha and K. Howard of Westlakes Club, is an attempt to produce a similar product for the Australian AOCP, but will also be of some interest to novice students who are aware of the limitations of the novice syllabus. It has very little on the Basics and little on Interference, but has good diagrams and does explain the answers to the questions which are grouped according to topic.

MORSE TAPE

Now for the final commercial: A reminder that I now have available from DOC ten past Morse exams at each speed, 5 and 10 w.p.m. Send me a C60 tape and I can copy what you wish onto it — 5 exams fills 30 minutes.

THEORY TRIALS

There are now two novice and one AOCP trial theory exams available, and three Regulations papers available from the Executive office. I hope to have another AOCP theory paper ready early in July for the August exam. I would be pleased to hear from anyone who has used any of these papers if you would like to comment. Let me know if there is any other way I can help. ■

ALARA

AUSTRALIAN LADIES' AMATEUR RADIO ASSOCIATION

Margaret Loft VK3DML
28 Lawrence Street, Castlemaine 3450

ALARA CONTEST

Hello to all again. The new rules for ALARA Contest have now been finalised and will be distributed to magazines for publication so watch Contest columns.

CONGRATS, JOY

Congratulations to Joy VK2VJV, who passed the AOLCP. Joy is now awaiting a "K" call.

NEW MEMBERS

Welcome to new members: Charlene VK1NEJ, youngest member and only VK1, Lesley VK4ZN, Barbara VK3PCI, Susan VK2PLG, Christine VK4VIT, Judith VK5NNW, Wendy VK2YQK/VKD, Margaret VK2DQG. Sponsored: Diana VY1DV, Sharlot 5Z4CM.

ALARA AWARD

Mavis VK3KS is being kept busy with the ALARA Award applications, but please remember to sign your application and get two licensed amateurs to verify your log. 50 certificates were issued under old rules, 7 under new rules, plus 27 additional stickers.

A very special thank you to Valda VK3DVT, our Treasurer and a talented artist, who designed the contest certificate. Those who have receive one will agree with me they are well worth winning. So why not participate in our contest number 2 on 13th November, 1982, and see if you can receive one next year.

MEETINGS AND NETS

Remember the ALARA meetings on air on the fourth Monday of each month on 3.570 ± QRM at 1030Z. ALARA nets on same frequency and time each Monday.

HOLIDAY TIME

Hope all who have had holidays enjoyed themselves. Geraldine VK2NQI and family planned a caravan trip to Queensland in May, and my family are off to Lakes Entrance then up the coast of NSW for a couple of weeks. Really looking forward to a break. Next report will be written en route.

Until next month, good luck, DX and keep happy.

33/73/88. Margaret VK3DML. ■

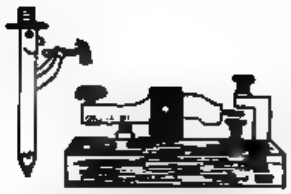
GREMLINS LOOSE

Unfortunately the gremlins caused a misprint in "System Loss and Antenna SWR" in April AR, page 24.

The second line in the simplified step-by-step calculation should read.—

$$\sqrt{(2)^2 \times \sqrt{(3)^2}}$$

■



Slow Morse Broadcasts

Marshall Emm VK2DXP
PO Box 382, Goulburn, NSW 2580

Tune in to 3.550 MHz at 0930Z any evening and you will hear a Morse Code practice session under the aegis of VK2BWI, conducted by a volunteer member of the VK2 Slow Morse Team.

It is something that is universally acknowledged to be of great benefit to anyone learning Morse Code, yet most amateurs take it for granted.

If you ever stop to think about it, there must be more to it than meets eye (or ear).

RESPONSE NEEDED

As the newly appointed Slow Morse Supervisor for the VK2 Division, two problems immediately confront me — what sort of broadcast is of most benefit to the listener, and what can be done to get more people involved in the effort? Your response to this article will go a long way toward solving those problems.

PRACTICE SESSIONS

In consideration of the format and content of broadcasts, it must be stated up front that the purpose of the broadcast is to provide USEFUL PRACTICE TO EXAMINATION CANDIDATES. Where time permits, broadcast operators are free to provide practice at higher speeds for those who wish to improve their copying ability, but that is the basic principle behind sponsorship of the broadcasts by the WIA Education Service. Providing "useful practice", though, is not as simple as it may seem at first glance. There are two examinations, at 5 and 10 w.p.m., so practice must be given at speed ranges from 3-4 w.p.m. (beginners) to 12 w.p.m. (full call candidates). Punctuation and numbers are included in the examinations, so they must be included in the practice sessions. So the basic format of a practice session is simply this — letters, numbers, and punctuation at speeds ranging from 3-4 w.p.m to 12 w.p.m.

COMMENTS PLEASE

And now we get back to one of the basic reasons for this article. A team member can only gauge the success or otherwise of his efforts by means of feedback from the listener. Call-backs are taken after each session, but they come from licensed amateurs only, who have generally listened to the fast, faster portion of the broadcast. Therefore I would like to take this opportunity to invite written comments from ALL listeners. A questionnaire is provided at the end of this article for those who have opinions in the areas surveyed, and we would like to see as many responses as possible, so we can either (a) applaud ourselves for doing the right thing, or (b) try to improve things for the listener. Hopefully both! And please bear in mind that we are soliciting the opinions of all listeners, licensed or not, regardless of whether they are located in VK2 or not.

WE NEED VOLUNTEERS

This has been stated with monotonous regularity ever since the first broadcast. If you are a licensed amateur, why can't you help? Aside from the satisfaction of participating in a team effort, conducting the practice sessions is an invaluable contribution to the education of prospective novices and full calls, and it is also good practice (a lot of regular CW users could use some sending practice!).

BRASS POUNDERS

Not much is required, really. You don't have to have a full licence. You don't have to be able to copy Morse at 12 w.p.m. in order to be able to send it. You can use a straight key, a keyer, a computer, or any other device which makes the job easier (as long as it's legal). You can send any sort of material you like (bearing in mind copyright, as well as legality and good taste). You can pound brass for an hour, or break it up with SSB read-backs.

Most of the current team members conduct a regular session on the same night each week, but there is an urgent need for relief operators, some of whom, if they are willing, will eventually become full time regular operators. You can't expect any amateur to give an hour each week forever, and if there are enough casual operators around, it shouldn't be necessary. Even if you would be willing or able to do only (say) one session per month, please let us hear from you.

You will not be "dropped into it" Any team member, including myself, will be more than happy to give any possible advice and assistance. If you respond in the affirmative to Question 7 on the questionnaire, I will send you a sample broadcast format, and we can take it from there.

THANKS

Finally, on behalf of the VK2 team and, I am sure, team members in the other Divisions, our thanks to those who call back with their invaluable comments and expressions of support. To all the other listeners — let us know you're out there!

SLOW MORSE QUESTIONNAIRE

Please complete and return to Marshall Emm VK2DXP, PO Box 362, Goulburn, NSW 2580.

1. I find the most useful material is: ☐ plain text ☐ letter groups and number groups ☐ mixed letter and number groups ☐ combination of the preceding types ☐ other .
2. I am currently most interested in Morse sent at speeds of: ☐ 3-4 w.p.m. ☐ 5-6 w.p.m. ☐ 10-12 w.p.m. ☐ other
3. I am a: ☐ prospective novice ☐ prospective full call ☐ full call ☐ other
4. I feel that: ☐ all sessions should be in the same format ☐ different formats are better.
5. I believe that Morse text should be read back on phone: ☐ Yes ☐ No.
6. Any other comments:
7. I might be able to help by conducting the odd session, if adequate training and support are given: ☐ Yes ☐ No.

NAME

ADDRESS

CALL (if any)

TELEPHONE

■

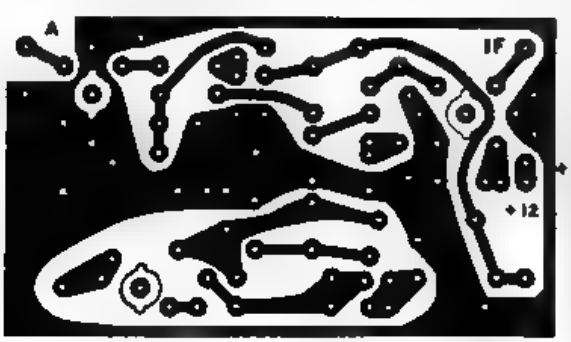
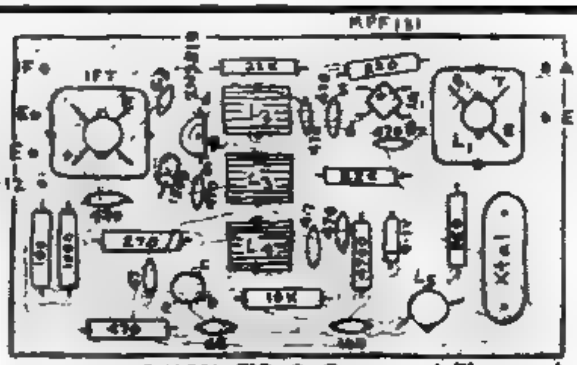


FIG. 1: PCB Artwork.



EN3563 FIG. 2: Component Placement.

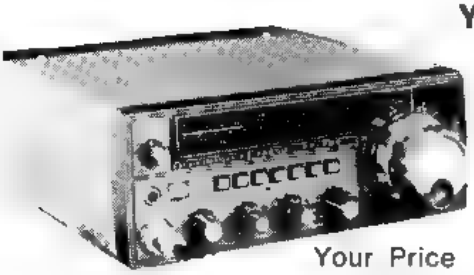
The gremlins also attacked the camera.

In reproducing the circuit boards in 2 Metre Converter, page 14, May AR, they were increased 20%.

This is as they should have been — full size.

Andrews Communications Systems

YOU JUST CAN'T BUY BETTER...



YAESU FT-707

HF SSB Transceiver, 12V DC

- ☆ FC-707 $138
- ☆ FP-707 $169
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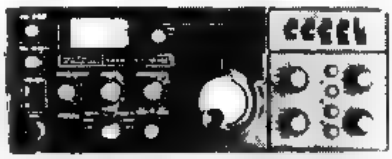
YAESU FT-107M DMS



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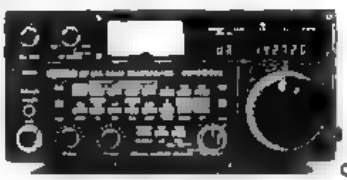

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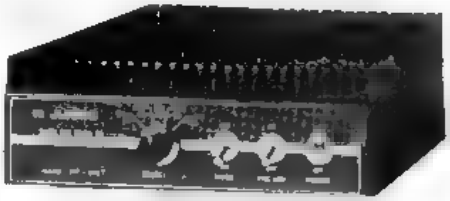

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- Receive pre-amp.

$399 incl. TVI filter

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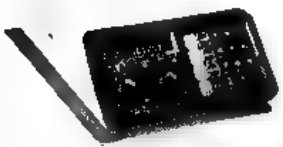

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MIRAGE

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(2m models below)

B23 — 2W IN, 30W OUT **$119** ★ B108 — 10W-80W **$225**

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THE MAIL ORDER SPECIALISTS Write to: P.O. BOX 33, KENSINGTON N.S.W. 2033

CONTESTS

Reg Dwyer VK1BR
P.O. Box 236, Jamison, ACT 2614

CONTEST CALENDAR

June		
12-13	ARRL VHF	CQ
12-13	SOUTH AMERICA CW	CQ
18-20	SMIRK QSO PARTY	CQ
19-20	ALL ASIA DX	AR (June)
26-27	ARRL FIELD DAY	CQ
July		
3-4	VENEZUELA PHONE	CQ
17-18	INTERNATIONAL QRP	CQ
24-25	VENEZUELA CW	CQ
August		
7-8	EUROPEAN CW	CQ
14-15	SARTG RTTY	CQ
21-22	ALL ASIAN CW	AR (June)
	CLYDE VALLEY DX	(DX Column May)

THE 23rd ALL ASIAN DX CONTEST

The purpose of this contest is to enhance the activity of radio amateurs in Asia and to establish as many contacts as possible during the contest periods between Asian and Non-Asian Stations.

Contest Period

(1) Phone: 48 hours from 0000 UTC June 19, 1982, to 2400 UTC June 20, 1982.
(2) CW: 48 hours from 0000 UTC August 28, 1982, to 2400 UTC August 29, 1982.

Bands

Amateur bands under 30 MHz.

Entry Classifications

(1) Single operator, 1.9 MHz band (CW only).
(2) Single operator, 3.5 MHz band.
(3) Single operator, 7 MHz band.
(4) Single operator, 14 MHz band
(5) Single operator, 21 MHz band.
(6) Single operator, 28 MHz band.
(7) Single operator, Multi-band.
(8) Multi-operator, Multi-band.

Power, Type of Emission and Frequencies

Within the limits of own station licence.

Contest Call

(1) For Asian stations:—
  (a) Phone — "CQ contest".
  (b) CW — "CQ test".
(2) For non-Asian stations:—
  (a) Phone — "CQ Asia"
  (b) CW — "CQ AA".

Exchange

(1) For OM stations: RS(T) report plus two figures denoting operator's age.
(2) For YL stations: RS(T) report plus two figures "00 (zero zero)".

Restrictions on the Contest

(1) No cross band contest.
(2) For participants of single operator's entry: Transmitting two signals or more at the same time, including cases of different bands, is not permitted.
(3) For participants of multi-operator's entry: Transmitting two signals or more at the same time within the same band, except in case of different bands, is not permitted

Point and Multiplier

(1) For non-Asian stations.—
  (a) Point — Perfect contact with Asian stations (excluding US auxiliary military radio stations in the Far East, Japan: KA stations) will be counted as follows:—
  1.9 MHz band: 3 points.
  3.5/3.8 MHz bands: 2 points.
  Other bands. 1 point.
  (b) Multiplier — The number of different Asian prefixes worked on each band. According to the WPX rules.
(2) JD1 station:—
  (a) JD1 stations on Ogasawara (Bonin and Volcano) Islands belong to Asia.
  (b) JD1 stations on Minamitori Shima (Marcus) Island belong to Oceania.
(4) Contacts among Asian stations and among non-Asian stations will neither counts as a point nor multiplier.

Scoring

(The sum of the contact points on each band.)
(The sum of the multipliers on each band.)

Awards

(1) For both Phone and CW, certificates will be awarded to those having the highest score in each entry in proportion to the number of participants from each country.
(2) The highest scorer in each Continent of the single operator multi-band entry will receive a medal and certificate from the Minister of Posts and Telecommunications of Japan.
(3) The highest scorer of the multi-operator multi-band entry in each Continent will receive a medal.

Reporting

(1) Submit a summary sheet and logs of only one classification.
(2) Both log and summary sheet must arrive in JARL, PO Box 377, Tokyo Central, Japan, on or before the following dates:—
  (a) Phone — September 30, 1982.
  (b) CW — November 30, 1982.

Disqualification

(1) Violation of the contest rules.
(2) False statement in the report.
(3) Taking points from duplicate contact on the same band in excess of 2 per cent of the total.

Announcement of the Results

(1) Phone — About February, 1983.
(2) CW — About April, 1983.

You may have contest results by enclosing one IRC and SAE with your log. ■

ALARA'S FIRST CONTEST RESULTS

VK2PFH	42	VK4VCE*	43
VK2AKE	51	VK4-L40018*	90
VK2KDX	80	VK5CA	20
VK2NQI	83	VK5ANW	38
VK2DIX	91	VK5QO*	162
VK2NYL	99	VK6YL	25
VK2SU*	150	VK6QM	36
VK2DYL†	313	VK6JS	42
VK3DMS	3	VK6YF	43
VK3DJN*	17	VK6WT/YF	59
VK3DML	44	VK6NYL	88
VK3DVT	69	VK6KYL*‡	175
VK3KS*	406	VK7NPR	4
VK3XB*	308	VK7HD	112
DX			
ZL2AZY	96	VE3DNV	7
ZL2QY*	121	VE3ARG	38
ZL3RK*	124	VE6AUP	53
ZL1BIZ*	148	VE7CBK*	103
P29NSF*	159	DF2SL	46
G4EZI*	81	DJ1TE	84
N6ARR*	40	DJ0EK*	87
WA2NFY*	50	DJ2YL*	210
WB3CQN	163	PA3AWI	13
WB7QOM	287	PA0HIL	17
WA3HUP*	297	PA3ADR*	43
VY1DV	13		

* Denotes certificate winner.

† Club station.

‡ Also top score VK novice.

JOHN MOYLE CONTEST

Unfortunately the logs of the Geelong Amateur Radio Club arrived at my address well after the copy for May AR had been sent for publication, mainly because of its route through Orange and then to Canberra.

This is a great pity, as the score gained by the Club was a tremendous effort and is well worth commendation.

Because the certificates have already been sent and the results recorded it is impossible to award this Club with a place. However, they will receive a certificate for excellent performance for the very good score rate they achieved.

Best of luck. ■

REMEMBER

CALL BOOK DATA

The Editor is aware that there are still a small number of errors, duplications and omissions as well as uncorrected addresses in the current edition.

The data in the Call Book is only as accurate and complete as the information supplied to the Institute.

PLEASE tell us about any errors, etc., and please tell your amateur friends to tell us too. *Write to* —

WIA

Box 150, Toorak, Vic. 3142

DXCC NEWS FIRST!!

VS9K has been deleted from the countries list by the ARRL. Any future operation from the islands would count as the Republic of Yemen (7O1) This deletion will apply to our DXCC listings and amended totals will be shown in the top DXCC tallies, published in September AR The current number of countries now on the list stands at 318.

XZ5A AND XZ9A

At present no credit is being allowed for contacts with these two stations. This operation is not recognised by the "lawful" government of Burma and therefore these operators could be classified as pirates. If we accept this operation we should also accept any operation by anyone operating in our amateur bands, using a VK call, provided they were located in Australia. The fact that XZ5A and XZ9A are DX and nearly everyone needs a genuine Burma QSL (myself included) does not legitimise the situation.

RE-APPRAISALS NEEDED?

Let's be honest, the present DXCC countries list is in a mess How can one justify buildings as countries? 4U1UN, 4U1ITU and fA0KM — pieces of rock jutting out of the ocean KS4 Serrana Bank, KP6 Kingman Reef, VK9 Mellish Reef, or the same location counting as two countries, depending on the call sign in use? T31 or KH1 I do not suggest that I have the answers though I do believe the time has come for a re-appraisal of the situation.

AWARDS ISSUED

Awards issued and amendments made during the period 1st January, 1982, to 31st March, 1982, are listed below

WAVKCA AWARD

Call Sign	Cert. No.	Call Sign	Cert. No.
JH2UZR	1023	I5HOR	1030
VS5JM	1024	ZL4JN	1031
PA0BDO	1025	GI3YDH	1032
DJ6MA	1026	JH6XJW	1033
A4XIU	1027	VK2PY	1034
VK8YF	1028	JH1EDB	1035
WB4SXX	1029		

DXCC NEW MEMBERS

PHONE

Call Sign	Cert. No.	Tally
VK4VBK	285	106
VK3VSL	286	107
VK4VIC	287	101
VK3JI	288	249/260

CW

VK5DL	119	100

Mike Bazeley VK6HD
8 James Road, Kalamunda, NA 6076

OPEN

VK5SO	207	253
VK3NUN	208	130

DXCC AMENDMENTS

PHONE

Call Sign	Tally	Call Sign	Tally
VK2AHH	273/286	VK3NSR	219/220
VK2BQS	120	VK4VC	308/319
VK2NHV	169/170	VK5LC	256/266
VK2VFT	163/164	VK5WO	267/285
VK3ALM	256/262	VK6AJW	251
VK3AOT	211	VK6HD	304/311
VK3DFD	260/261	VK6NE	299/306
VK3DUJ	247		

CW

Call Sign	Tally	Call Sign	Tally
VK2AHH	135/150	VK3JI	220/241
VK2QL	311/350	VK5ARA	113
VK3AKK	135	VK6HD	261/267

OPEN

Call Sign	Tally	Call Sign	Tally
VK2AAC	168/171	VK5ARA	185
VK2AHH	282/308	VK5WO	294/317
VK3JI	268/293	VK6HD	311/324

RTTY

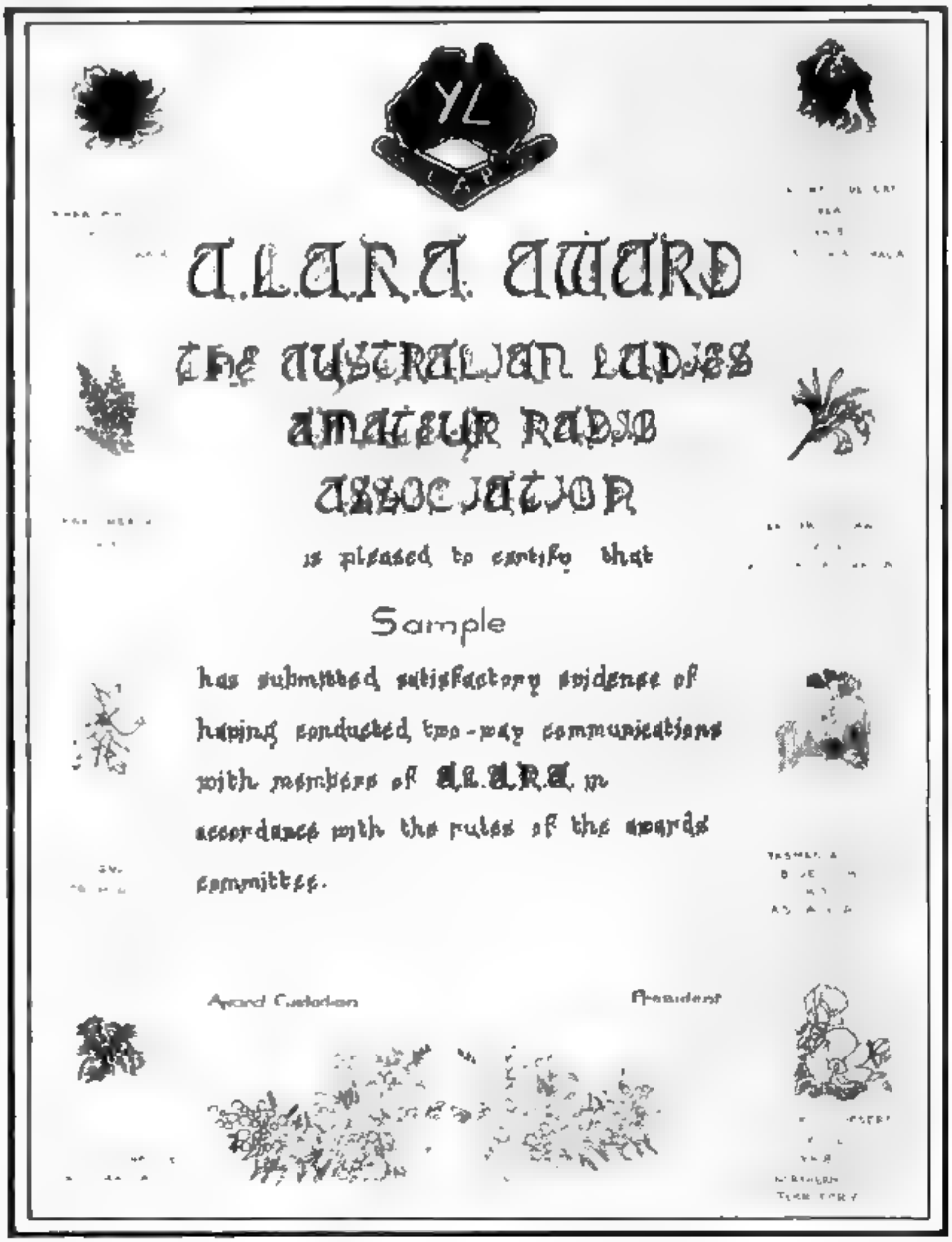
Call Sign	Tally
VK2SG	123/124

NEW AWARD

Mavis VK3KS has forwarded requirements for the Australian Ladies' Amateur Radio Association (ALARA) Award. This award is available to all licensed amateurs and SWLs.

RULES

(Starting date 1st January, 1982)



For VK/ZL: 10 members to be contacted and to include 5 Australian States.

For DX: 5 members to be contacted and to include 4 Australian States.

All contacts to have been made with members on or after 30th June, 1975. No 2 metre repeater contacts will be allowed.

Applicants must submit a complete extract of log entries, which is to be certified correct by two other amateurs whose signatures must be appended. In the event of an applicant in an isolated location being unable to obtain certification, QSL cards should be forwarded in lieu.

Application must include full name, address, signature and call sign of the applicant.

All contacts must be made from the same call area

Special endorsements available, e.g., Mixed, All CW, All Phone, All 28 MHz, etc.

Endorsement stickers available for each 10 additional members contacted. For DX applicants, 5 additional.

FEE

Application should be accompanied by the equivalent of 3 Australian dollars or 7 IRCs. Fee for additional stickers, 1 Australian dollar.

APPLICATIONS SHOULD BE FORWARDED TO

ALARA Awards Manager,
Mavis Stafford VK3KS,
16 Byron Street,
Box Hill South,
Victoria 3128, Australia. ■

* * * *

AMENDMENT TO "A NEW TOWER DESIGN" March '82, page 12

Since drawing up his tower design article over 12 months ago, John has made some modifications which he feels are an improvement.

John has changed the tower leg base from ½ in. to 1¼ in. pipe.

John has also changed his identification to VK6NJV/ZVZ from L60052 and many will recognise him better by his call sign rather than his SWL call, as he has had well over 6,000 QSOs

We also had a misprint in the article. VK6LY, photographer, should read VK6IY. ■

* * * *

STOLEN EQUIPMENT

Vicom would like to advise readers of this magazine that items bearing the serial numbers shown below were stolen from Vicom's premises in April. Readers are warned against purchasing this equipment and in the event that such equipment is offered to them for sale should contact Vicom or the Police

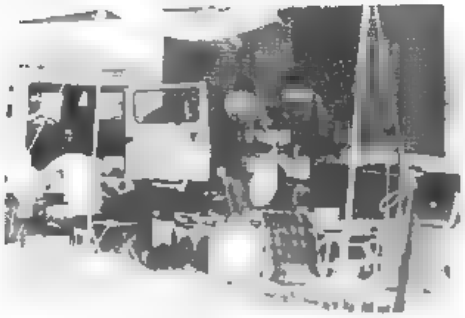
Icom IC-290A,	Serial No. 14101468.
Icom IC-730,	Serial No. 13803754.
Icom IC-2B4,	Serial No. 13701101.
Icom IC-BP2,	Battery Pack.
Icom IC-4E,	Serial No. 15701304.

■

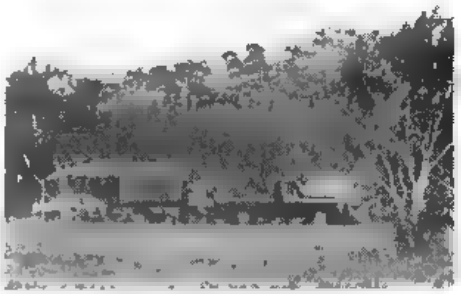
John Moyle Field Day

Mount Isa and Districts Amateur Radio Group were out and about during the recent "John Moyle Memorial Field Day Contest".

They were located at Spring Creek, N.W. Queensland and were operational on the 160, 80, 40, 20, 15, 10 and 2m bands.



Operational Sight



Working Conditions

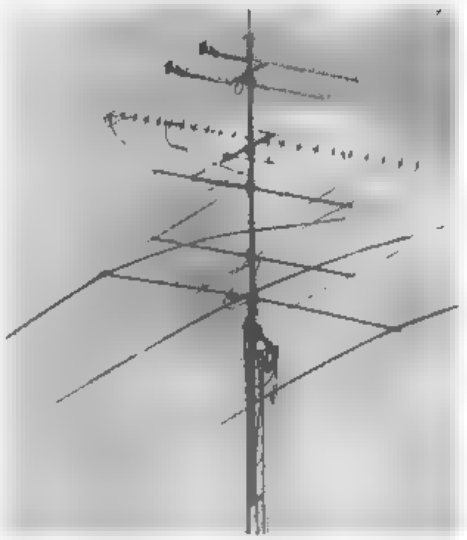
Interesting VHF DX

On 25th January 1982 at 0820 UTC Richard VK2BDN received a telephone call from New Zealand stating that the band was open on 2 metres. Richard promptly fired up on 432 MHz and contacted ZL2VT. The QSO lasted for over one hour with ZL1TGB, ZL2TAL and ZL2THG joining in with signals peaking to S8. 1296 MHz was also tried but with no success.

Openings of this type may be a regular occurrence as two years previously similar openings occurred.

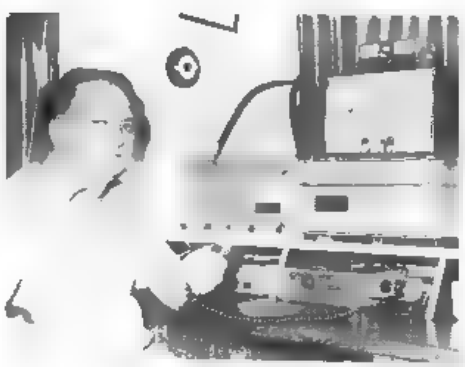
On 8th February 1982 a similar opening occurred with 5 x 9 signals lasting for several hours, and again on the 9th when Richard contacted Brian ZL1AVZ and as conditions were so good it was suggested to try 1296 MHz. At 2045 UTC contact was made, Brian using CW and SSB was receiving R5 S3 whilst Richard copied Brian R5 S2. Signals held up for approximately 20 minutes.

This contact over 2134 km (1326 miles) was made more remarkable since Brian was using only 5 watts on CW and 1.3 watts on SSB while Richard was using 35 watts.

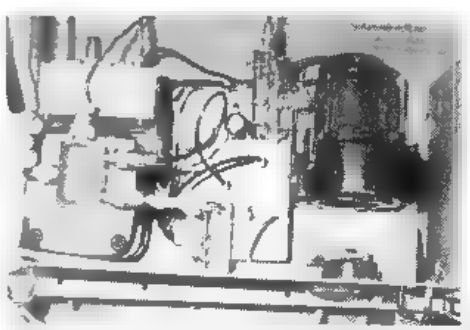


Dick's antenna array with two 1296 loop yagis near the top.

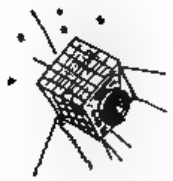
Brian was using a Microwave Module transverter and a 4 metre dish and Richard had a home brew transmitter using a 2C39 mixer driving a 2C39 amplifier with Microwave Module pre-amplifier receiver and two 27 element loop yagis.



Dick VK2BDN at his 1296 operating position.



Transmitter using 2C39 mixer driving 2C39 amplifier.



AMSAT AUSTRALIA

Bob Arnold VK3ZBB
41 Grammar Street, Strathmore 3041

CO-ORDINATOR
CHAS ROBINSON VK3ACR.

AR NOTES
BOB ARNOLD VK3ZBB.

CORRESPONDENTS
VK3KW, VK3YCQ, VK5HI, VK5AGR.

ACKNOWLEDGEMENTS
ASR (AMSAT Report).

INFORMATION NETS
AMSAT AUSTRALIA
Control: VK3ACR.
1000Z Sunday and Wednesday, 3.660 MHz* (7 064 MHz in summer).

AMSAT PACIFIC
Control: JA1ANG.
1100Z Sunday, 14.305 MHz.

AMSAT SW PACIFIC
Control: W6CG.
2200Z Saturday, 28.880 MHz.

FREQUENCIES
*It is frequently difficult, during spring and autumn, to find a frequency which will give Australia-wide coverage from Melbourne. It is suggested that listeners try both frequencies nominated above.

PHASE IIIA
As reported last month the launch of Phase IIIA by ESA, the European Space Agency, has been delayed for a minimum of two months. Surprisingly this is not due to the Ariane launch vehicle but to problems which have arisen with the main payload. An investigation is under way into the design of the MARECS series and similar satellites, but meanwhile some confusion exists on launch dates for several satellites.

MORE CONFUSION
ASR reports that RCA will shortly discontinue the manufacture of the 807 and other veteran valves.

The only hospitality I can offer in future will be a mundane MRF 747 or similar fruit juice!

THE FUTURE
Some months ago I philosophized on the future role of amateur satellites and in particular the growing number of persons without a radio background who have become interested in our segment of the hobby. In fact, it has since been suggested to me that there are more non-amateur satellite enthusiasts in this country than amateurs themselves.

This subject was referred to in AMSAT Satellite Report No. 29 and subsequently at the April meeting of AMSAT Directors.

I quote from ASR following references to future launch opportunities: "It may be time to consider aligning ourselves with a broader community of amateurs in space. Not 'radio' amateurs but folks like the World Space Foundation (Solar Sail), the Independent Space Research Group (Amateur Space Telescope) and others. Should AMSAT assume a leadership role in the broader context of amateurs in space? And if we don't move forward with inspired, constructive use of launch opportunities will somebody else displace us? Does it come down to, lead or be led (at your own peril)?"

The outcome of the Board of Directors discussion on this item was (a) to pursue a liaison with a university engineering department for the purpose of co-operative effort and (b) to persue with vigor, co-operation with the Independent Space Research Group (ASR No. 30).

FUTURE LAUNCH SLOTS
Options afforded by two major launch opportunities to follow Phase IIIB have been under discussion.

In the first case an AMSAT payload would displace a US Government simulator of some 500 kg in mass. One can imagine the wide array of experiments which could be included in such a payload but at a cost and effort which must be shared by all enthusiasts.

The second possibility could be the payload aboard the next generation Ariane 4 launch vehicle. This could provide a payload of up to 4,000 kg. Both possibilities provide for geosynchronous launch and to serve all the world's amateur population a so-called geosynchronous drifter may provide an acceptable solution. (It should be borne in mind that a geosynchronous satellite will look at only one-third of the earth's surface and most of the satellite fraternity are either side the Atlantic Ocean.) The drifter would always give an "out of sight" period twice as long as the "in sight" period and would certainly be a boon to amateurs on the "wrong side" of the earth.

1983 and 1984 are not far away so there should be some more news in the near future.

SATELLITE STATUS REPORT
AMSAT OSCAR 8 continues to operate satisfactorily on both Modes A and J. There is a tendency for the battery temperature to increase to a dangerous level but in recent weeks the temperature has stabilised around 40°C — this is just OK. The RS series perform faultlessly and we still await for some further project to emerge from one or more of the six satellites.

At the time of writing there is disturbing news of UOSAT OSCAR 9. It is understood that, during the Easter period, a new command was sent to UO9 which permitted the simultaneous operation of the beacons on 144.825 and 435.025 MHz. These beacon signals caused the command receiver to be desensitized, thus blocking further command signals to the satellite. On 22nd April and subsequent days very high power signals, in the order of 1 mW ERP, were sent to UO9 but to date they have been of insufficient strength to activate the command receiver

PHASE III COUNTDOWN
By courtesy of AMSAT Satellite Report here is the second of the Phase III Countdown Series.

Ariane Launcher

In this second of the Phase III Countdown series in ASR we will begin our detailed look at the various systems that will make the entire project work. Appropriately we begin our detailed view with the baseline for everything; the launch vehicle which will carry Phase IIIB to its lofty perch from which vantage the wonders fashioned by technicians around the world will become real.

In many ways Ariane is rather conventional as launch vehicles go. In fact the 11-nation consortium that comprises ESA, the European Space Agency, is counting on that conventionality to payoff. They believe that the lower risk, "standard" approach is to be preferred over any attempt at radical new technology as alluring as may be the potential benefits. For example, the Viking engines that power its first two stages are derivatives of the well-tested French Diamant rocket of the mid-sixties. That spells low risk. Now seeing the first three of four Arianes as successes, the path ahead for the operational launch appears bright indeed. In fact, the failure of other major programmes was, at times, much more dismal than is Ariane's now.

The main mission of Ariane is to carry about 1,700 kg (3,750 lbs.) to a geosynchronous transfer ellipse of 200 km x 36,000 km and 7° inclination from the launch site at Kourou, French Guiana. To do this, Ariane uses a three-stage liquid fuelled rocket.

Ariane's first stage engines are called the Viking 5. Clustered in the "four pack" they are called the L140 stage. The L140 is rated at 2,445 kN thrust at lift-off and at 2,745 kN in a vacuum The specific impulse of the stage is 281 3 seconds. The fuel for the engines is UDMH or unsymmetrical di-methyl hydrazine. This liquid is combined with the oxidizer, nitrogen tetroxide in the combustion chamber at considerable pressure to produce the thrust The two components do not require an ignition source as they explode on combination The first stage engines burn for 145 seconds. For steering, each of the Viking 5 engines can be gimballed in pairs about two orthogonal axes to provide three-axis control.

The second stage consists of a single Viking 4 engine called a L33 stage. It uses the same fuel as the first stage. The L33 develops a thrust of 709 kN in a vacuum with a specific impulse of 293.5 seconds. The second stage burns for 132 seconds.

The third stage of Ariane is the first cryogenic stage developed in Europe. It caused considerable headaches and worry since it WAS a development item unlike most of the other hardware. It had a strong tendency to explode in ground tests. However the devils in the design seem to have been exorcised and the flight tests of the third stage have been good. What makes the third stage so tricky is the use of the combination of liquid oxygen (LOX) and liquid hydrogen. The HM-7 engine produces a thrust of 60 kN and has a specific impulse of 440 seconds.

The engines for all three stages are built by Aerospatiale/SEP with Air Liquide and MBB participants in the HM-7 cryogenic engine of the H8 third stage.

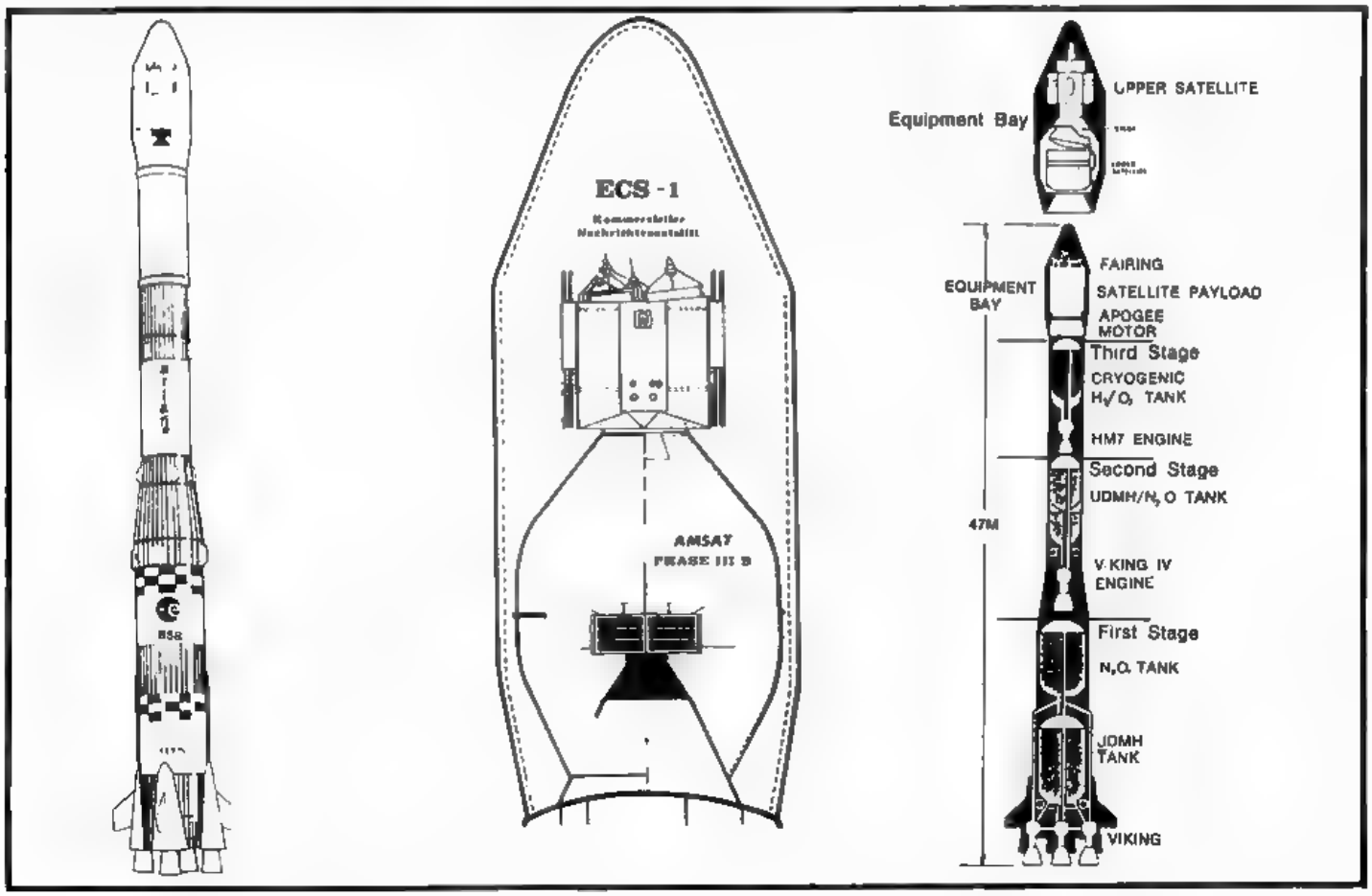
In all, the Ariane stands 47.4 metres (155.5 feet) tall and weighs 207 metric tonnes (455,400 lbs.). At lift-off 90 per cent of the weight is propellant (fuel and oxidizer). The structures account for 9 per cent and the payload a mere 1 per cent of take-off weight. The third stage diameter is 3.78 metres (12.4 feet) and the diameter of the second and third stage is 2.6 metres (8.5 feet).

The payload sits atop the entire arrangement covered by a fairing which protects the payload during the ascent. The interior of the fairing is a roomy 3 metres in diameter by 5.3 metres high (9.8 x 17.4 feet), which is large enough for the largest satellites or two medium sized satellites to be accommodated. Phase IIIB will be carried aloft with another satellite in the Ariane double launch system called SYLDA. The fairing consists of two half shells that are jettisoned during the second stage burn when the launcher has reached about the 110 km altitude.

The launch site at Kourou is especially noteworthy because of its proximity to the equator. The site's latitude of 5.23°N allows it an advantage of using the added velocity of the earth's surface at the equator to add to the launch velocity of the Ariane. It's rather like an aircraft carrier turning into the wind to launch its aircraft, though this is a superficial analogy to be sure. In any case the low latitude affords Ariane a 17 per cent throw weight advantage over Cape Canaveral.

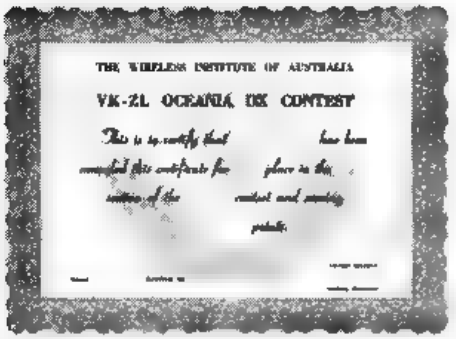
Ariane seems to be a launcher with a growing following. Since the successful completion of the fourth and final test launch, LO4, last year, three major US passengers have signed on for launches of their communications satellites. AMSAT's launch on L6 is presently scheduled for July 1982 after the May launch of L5. Let's all hope for a good ride!

Next time we'll look at another of the major systems that will make Phase IIIB the most exciting thing to happen in amateur radio. ■



1981 VK-ZL Contest Results (Overseas)

Neil Penfold VK6NE
388 Huntriss Road, Woodlands, W.A.


THE WIRELESS INSTITUTE OF AUSTRALIA

VK-ZL OCEANIA DX CONTEST

This is to certify that ... has been awarded this certificate for ... place in the ... section of the ... contest and awarded points.

Thanks to all who participated in the '81 Contest. Unfortunately, propagation was not in the best interests of operators for contest work. However, we are pleased that generally, those who entered the contest, enjoyed it enough to say that they will be back next year.

The 1982 Contest is arranged by the NZART, then it is our turn again in 1983. So let us hope conditions will be the best ever, and the logs roll in.

There is no listing of the logs from the USSR, as they have not, as of the time of writing these notes for publication, been received.

Thanks to you all from VK6NE, WIA VK/ZL Contest Manager and VK6FS, log checker and scorer.

Comments from the logs:

"Pretty hard going on 40", "VK4XA most consistent signal", "Didn't hear a VK5 or VK8", VE7BS . . . "Abnormally poor propagation condx to VK/ZL from UK on all bands. CUAGN in 82" G3PVA . . . "Thanks for the Contest", OH2BCI, OH7NW . . . "Conditions very bad, glad to get one contact at all", LA4YW . . . "DX conditions not as good as last year", I5YDI . . . "Bad conditions", YU7NQG . . . "Complete blackout in my area", OZ8AE (he was VK0JC) . . . "Unfortunately, activity from VK/ZL on CW seems to be less and less each year", OZ1LO . . . "Good on 20m, where were the ZL4s and VK8s", HB9IK . . . "First try with VK/ZL, will look for more activity next year", N0CKC . . . "Had only a few hours to spare", W3TV . . . "The usual 21 MHz opening was there, but something happened on 14", K3ZO/HK3 . . . "Nice to have good conditions and lots of participants this year. Both 15 and 20 being open for good periods made it possible to get lots of contacts", "When bands close it's tough from here", W1EVT . . . "Always enjoy this one, although, not much time this year", W5OB . . . "First VK/ZL for me, had a real fine time, you fellows sure have good ears", W1END . . . "Thanks for fine contest", JE3DYW, JA9SQO, JA3KMM . . VK/ZL stations not so active on 40m", JA7GLB . "Needs single band sections", JA1SJV.

SSB RESULTS

Call	Band	QSO's	Multi's	Points	Corr. Total
JG1ZUY	M	236	33	472	15,562
JA2GHW	M	196	31	392	12,006
JE3DYW	M	174	34	348	11,832
JA0GJJ	M	160	36	320	11,520
JA7YAL	M	165	32	330	10,560
JA0COL	M	161	31	322	9,932
JA8ACP	M	111	29	222	6,425
JA6BIF	M	96	33	192	6,323
JA4VZX	M	144	20	288	5,708
JA7BVH	M	116	24	232	5,568
JA5GDW	M	132	19	264	5,016
JM1NKT	M	116	21	232	4,872
JA9YBA	M	85	28	170	4,760
JE2KUC	M	129	18	258	4,644
JA4ZGT	M	121	16	242	4,352
JA3HTT	M	93	21	186	3,902
JA8MS	M	82	22	164	3,604
JA7JGG	M	85	19	170	3,227
JR3CVJ	M	80	20	160	3,200
JA7DOT	M	57	21	114	2,394
JA0FMB	M	60	17	120	2,040
JA8EFT	M	68	15	136	2,038
JA2YEF	M	53	16	112	2,016
JA6PL	M	58	15	116	1,740
JR6QDT	M	57	15	114	1,710
JA0EPF	M	41	20	82	1,640
JA6ODU	M	52	14	104	1,456
JA5CQS	M	52	14	104	1,456
JH2XTV	M	37	18	74	1,332
JR4CCG	M	48	13	96	1,248
JA7UFZ	M	37	14	74	1,036
JF3SFK	M	36	13	76	988
JF3EGT	M	38	11	76	836
JA4PA	M	25	16	50	799
JA7KM	M	26	13	52	676
JA9AAY	M	26	12	52	624
JA4DEI	M	33	9	66	594
JA6IP	M	23	11	46	506
JH4QJT	M	24	10	48	480
JG3WND	M	24	9	48	432
JK1EXF	M	13	9	26	234
JA1AAT	M	14	7	28	196
JA1RWI	40	16	8	32	256
JH8NFC	40	4	3	8	24
JJ1AJK	20	20	9	40	360
JA1DCO	15	32	8	64	512
JR2BPV	15	32	8	64	511
JR8CEV	15	32	8	64	384
JK1RJQ	15	23	6	46	368
JR2QUZ	15	25	6	50	300
JA1IT	15	20	7	40	280
JA3GCM	15	14	6	28	168
JA2KPV	15	8	8	16	96
JA4YCW	15	8	5	16	80
JA5DFY	15	9	4	18	72
JL1EJO	15	6	4	12	48
JE1PJR	10	56	9	112	1,008
JA4KWU	10	50	10	100	998
JA3BBG	10	48	10	96	959
JF2LEX	10	41	9	82	738
JH0QAD	10	36	9	72	648
JA4AOR	10	31	9	62	558
JH2ORT	10	27	9	54	486
JF3DLO	10	23	9	46	414
JM1AFK	10	16	7	32	224
JA1ALX	10	9	4	18	72
KOREA					
HM1SX	M	54	16	107	1,712
PHILIPPINES					
DU1CPL	10	282	8	285	2,218
SYRIA					
OH1TD/4U	15	11	5	22	110
CANADA					
VE7WJ	M	93	21	186	3,902
VO1AW	20	5	4	10	40
COLUMBIA					
K3ZO/HK3	M	43	22	86	1,892
UNITED STATES OF AMERICA					
W0KEA	M	237	47	474	22,211
AI9J	M	197	42	394	16,531
K6BPY	M	145	40	290	11,565
WB9MSV	M	80	23	160	3,675
K5CFU/4	M	65	27	130	3,510
N2LT	M	69	22	138	3,063
N4MM	M	65	20	130	2,600
LU3YL/W4	M	51	22	102	2,244
K9AB	M	39	15	78	1,170
W4PTT	M	37	14	74	1,036
K3ND	M	30	15	60	900
W8UVZ	M	27	12	54	648
W3ARK	M	27	11	54	594
W3ICM	M	11	7	22	154
K8VIR	20	90	12	180	2,160
KF1B	20	6	5	12	60
W9QWM	10	17	7	34	238
KD4PP	10	14	5	28	140
N3BO	—	—	—	—	CHECK
EUROPE					
IN3DYG	M	232	40	464	18,532
Y21YK	M	206	34	402	13,654
DJ9MT	M	130	24	260	6,240
SM4CTT	M	105	25	210	5,245
DK1IP	M	85	24	170	4,076
G3UVZ	M	79	22	158	3,476
G4KIP	M	71	20	142	2,840
OH2PM	M	80	23	120	2,760
OZ8BZ	M	59	23	118	2,711
SP9KLF	M	62	19	124	2,353
OZ4PM	M	61	19	122	2,306
EA3NA	M	62	22	104	2,288
DJ7AT	M	53	21	106	2,226
SM0DJZ	M	45	24	90	2,160
EA2IA	M	49	22	98	2,156
Y54TA	M	50	21	100	2,100
DL1JF	M	48	21	96	2,016
G5MY	M	44	22	88	1,936
PA3AVW	M	36	19	76	1,444
YZ9HOE	M	57	13	110	1,429
SP5BT	M	32	15	64	960
F6WE	M	32	13	64	832
PA0DUO	M	26	14	52	728
Y22WF	M	23	15	46	690
OH9IU	M	24	13	48	624
Y43ZI	M	22	13	44	572
SP9HWN	M	20	14	40	560
Y24SG	M	25	11	50	550
Y23DG	M	22	12	44	528
O75EV	M	21	12	42	504
I4CSP	M	18	11	36	396
LA8AE	M	16	11	32	352
LZ2KKZ	M	14	11	28	308
SM4BTF	M	14	10	28	280
HB9DX	M	14	9	28	252
ON4XG	M	13	9	26	234
Y43ZK	M	12	9	24	216
SM6BXV	M	13	8	26	208
OH7NW	M	10	10	20	200
LA2TO	M	15	6	30	180
Y24NG	M	9	8	18	144
PA0QLD	M	13	5	26	130
LA4YW	M	9	7	18	126
OH2BMP	M	6	6	12	72
YU7NZR	M	7	5	14	70
DF6QO	M	6	6	12	60
Y31WC	M	6	6	12	60
LA2AD	M	7	4	14	56
YO2BEH	M	4	4	8	32
I8SAT	20	59	12	112	1,344
YU3TMF	20	4	3	8	24
SP5ORH	15	13	5	26	130
SP3FRQ	15	10	5	20	100
Y43VF	15	5	3	10	30
OH3GZ	15	1	1	2	2
DK1AF	10	59	9	118	1,062
DK2WH	10	56	7	112	784
SM6LGW	10	35	8	70	560
Y39XO	10	25	7	50	350
SM7LSU	10	14	7	28	196
OZ7DX	10	2	2	4	8
YU1EXY	MO	179	39	358	13 962
Y44ZI/P	MO	113	28	226	6,876
YU6KOP	MO	37	15	74	1,109
YO3KWJ	MO	36	10	72	720

CHECK LOGS PA0TV, OK2SPS, SP5ACN, SP5EAQ, SP8BAI, LA4O, SM6LIF, Y67ZG, Y57ZL, Y54YD/P, Y54RN, Y32UG, Y31SK OH2BMH, OH3TY EL0AP/MM

SWL SECTION

SSB

Call	Corr. Total	Call	Corr Total
JA7-8347	17,920	4X4-1401	1,722
Y2-10260/E	9,928	DG4-FBG-SWL	1,330
RS31976	6,786	Y2-EA-11160/F	700
Y2-8252/H	4,848	JA5-3493	408
JA1-3477	3,648	Y2-4406/G	384
JA4-35188	3,476	JA8-3769	374
Y2-7215/I	3,350	JA2-31041	50
JA1-22458	3,300	OH6-145SWL	42
LZ1-E229	1,958	JA1-18277/W6	40
Y2-6405/N	1,768	Y2-EA-16589/A	8

CW				
JA1-3477	6,392	Y2-10280/E	644
HE9EVI	2,420	Y2-6405/N	380
JA6-9330	1,600	JA0-3235	228
OK1-11661	1,184	DE5-SML	140

CW SECTION

Call	Band	QSO's	Multi's	Points	Corr. Total
EUROPE					
Y39XO	M	78	31	158	4,636
Y21YK	M	79	27	158	4,266
G3WPF	M	61	27	122	3,294
HB9IK	M	59	24	118	2,832
OK3ZAM	M	50	18	100	1,800
OZ4PM	M	41	21	82	1,722
OZ5EDR	M	40	20	80	1,600
SM0AJU	M	39	20	78	1,560
OZ1LO	M	43	17	86	1,462
Y31XA	M	34	19	68	1,292
G5MY	M	39	16	78	1,248
SM6AYM	M	30	20	60	1,200
SM7ANB	M	31	16	62	992
DL1JF	M	30	16	60	960
SM6CAC	M	25	15	50	900
G3PVA	M	27	13	54	702
Y24EA	M	27	13	54	702
YU7NCG	M	27	12	54	648
OK2BUJ	M	31	9	62	558
I5YDI	M	22	10	44	440
Y64ZA	M	17	12	34	408
YU3TMF	M	18	10	36	360
ON4XG	M	16	10	32	320
SM5AHK	M	15	9	30	270
HB9AGH	M	15	9	30	270
HB9DX	M	15	8	30	240
OZ5KW	M	12	9	24	216
OH7NW	M	14	6	28	168
LZ2KKZ	M	12	7	24	168
DJ6QP	M	11	7	22	154
Y22WF	M	9	7	18	126
Y64YG	M	7	6	14	84
DL1TH	M	6	5	12	60
OH1PB	M	6	4	12	48
OZ8AE	M	4	4	8	32
YU7SF	M	4	3	8	24
Y23VB	M	3	3	6	18
Y31WC	M	2	2	4	8
OH2BCI	80	7	6	14	84
SP9HWN	40	2	1	4	4
YU7OCZ	20	25	8	50	400
I1XPQ	20	23	7	46	322
DL3DD	20	19	8	38	304
Y22LB	20	19	7	38	266
YU7NZR	20	10	7	20	140
EA2CR	20	11	5	22	110
OK2BJU	20	7	6	14	84
Y43ZK	20	9	3	18	54
SP9KLF	20	5	4	10	40
Y38ZB	20	3	1	6	6
LZ1IF	20	1	1	2	2
LZ1KBZ	20	1	1	2	2
SM0KV/0	15	30	9	60	540
LA4YW	15	1	1	2	2
OH2BAH	10	8	5	16	80
OZ1HXL	10	3	2	6	12
UK0FAI	MBMO	106	35	212	7,420
YO3KWJ	MBMO	22	14	44	616
SP7KTE	MBMO	22	11	44	484
YU6KOP	M020	13	7	26	182

CHECK LOGS LA6CJ, OK1AD, OZ7BW, SP2EFU, SP2GOW, SP7AW, SP9EMI, Y23BF, Y33UE, Y47YM, Y67ZG

JAPAN					
JH0BBA	M	112	40	224	8,960
JA0GJJ	M	107	36	214	7,704
JE1CKA	M	97	35	194	6,964
JA8EAT	M	93	33	186	6,138
JF2VDY	M	95	30	190	5,700
JH4IFF	M	82	34	164	5,576
JA4ESR	M	80	33	160	5,280
JA7GLB	M	82	32	164	5,248
JA2WB	M	92	28	184	5,152
JH3AIU	M	85	30	170	5,100
JA2PSV	M	82	26	164	4,264
JH9DCJ	M	67	30	134	4,020
JA7DOT	M	66	30	132	3,960
JA2DCN	M	74	25	148	3,700
JN1KEJ	M	71	26	142	3,688
JA2MYA	M	61	24	122	2,928
JA1SJV	M	50	22	100	2,200
JA9SQO	M	47	23	94	2,162
JA4BFL	M	61	21	102	2,142
JA3KMM	M	46	23	92	2,116
JE2IEQ	M	46	22	92	2,024
JH7WKQ	M	46	20	92	1,840
JA7BVA	M	42	20	84	1,680
JA2DN	M	40	21	80	1,680
JE3DYW	M	38	20	76	1,520
JA7UFZ	M	35	21	70	1,470
JA1OP	M	36	17	72	1,224
JH2XTV	M	32	18	64	1,152
JA4YFH	M	32	14	64	896
JA8SW	M	28	16	56	896
JR4CCG	M	29	14	58	812
JH5AUE	M	27	15	54	810
JA3ARM	M	26	11	52	572
JA3HTT	M	22	11	44	484
JA7YAL	M	17	10	34	340
JA6IP	M	15	11	30	330
JH1MTR	M	15	10	30	300
JR3XEX	M	11	9	22	198
JA7KM	M	11	7	22	154
JA8CAQ	M	7	5	14	70
JA2EAB	M	4	4	8	32
JH5HKV	20	17	9	34	306
JA1UPO	20	8	5	16	80
JK1LUY	20	6	4	12	48
JG2LGM	15	7	6	14	84
JA0BMS/1	15	8	4	16	64
JA7RXU	15	2	2	4	8
JR6LJO	10	30	9	60	540
JA4AQR	10	14	8	28	224
JA2XH	10	11	7	22	154
JA1AAT	10	5	5	10	50
UNITED STATES OF AMERICA					
W0KEA	M	141	44	282	12,396
W1EVT	M	127	43	262	10,793
AI9J	M	112	36	224	8,064
W8UVZ	M	105	37	210	7,747
WB4RUA	M	80	33	160	5,280
K9PQG	M	78	33	156	5,148
N2LT	M	79	29	158	4,582
K9GM	M	73	28	146	4,088
W5OB	M	61	28	122	3,416
[redacted]	M	68	22	136	2,992
W8MYP	M	50	16	100	1,600
AI8Z	M	40	20	80	1,600
W8NNV	M	48	15	96	1,440
W1END	M	40	16	80	1,280
K2LP	M	38	13	76	988
W3ARK	M	28	13	56	728
AA5EE	M	27	13	54	702
W3TV	M	20	12	40	480
W9QWM	M	22	10	44	440
N0CKC	M	15	8	30	240
WA0TKJ	10	20	7	40	280
CANADA					
VO1AW	M	11	7	22	154
VE7BS	40	27	10	54	540
PANAMA					
HP1AC	M	38	12	76	912
COLUMBIA					
K3ZO/HK3	M	34	13	68	884
ARGENTINA					
LU1EWL	M	5	4	10	40
LATE LOGS					
PHONE-					
OK1KQJ	M	73	23	146	3,335
OK1AGN	M	38	19	76	1,444
OK1KZ	M	16	10	29	290
OK2YN	M	9	6	27	162
OK1ATE	14	44	11	85	935
OK1TN	21	62	8	121	968
OK1ARI	21	51	10	89	890
OK2PDE	21	12	5	24	120
OK2BJR	28	5	4	10	40
CW					
OK1KQJ	M	[redacted]	25	136	3,400
OK1WT	M	68	23	130	2,990
OK1AGN	M	[redacted]	15	72	1,080
OK3KYR	M	[redacted]	14	70	980
OK1KZ	M	[redacted]	8	18	144
OK1TN	14	15	6	30	180
OK3IF	14	[redacted]	5	24	120
OK1ZY	14	[redacted]	5	12	70
OK1JDJ	14	5	3	10	30
OK1KRQ	14	[redacted]	3	8	4
OK1DRN	14	2	2	4	8
OK1AER	21	25	7	14	380
OK2SAT	21	16	5	32	180
OK2BMH	21	11	5	22	110
OK1MHA	21	1	1	2	2

QSP

TO BUILD OR NOT TO BUILD

The question to build or not to build continues to interest many amateurs and would-be amateurs. Most accept that the vast majoritiy of non-professional constructors have virtually no hope of successfully cramming into a small enclosure the amount of electronic gubbins now provided in many of the factory-built black boxes. But some question whether all this digital circuitry — providing greater operating convenience but often adding little to basic communications performance — is really essential

Homebrew enthusiasts all agree that home-construction should be encouraged. Some go further and claim that operating factory-built equipment is not experimental amateur radio at all. I feel this is taking the argument too far; my dividing line would be determined more by whether or not the operator understands how his equipment works and is genuinely interested in radio communication and propagation, etc. After all, you can, for instance, be a genuinely keen amateur photographer without actually constructing your own camera; but one would expect such a person, unlike the chap who is interested only in taking a few holiday snaps, to come in the fullness of time to understand a good deal about the basic techniques and chemical processes of photography, be interested in its historical development and keep abreast of current trends.

Similarly amateur astronomers contribute to useful scientific studies without necessarily building their own telescopes. So it seems to me that while home-construction has a very important role to play in experimental radio — because practical projects are surely the very best way of learning to understand the technology — it is not the only mark of genuine amateur radio. ■

(Pat Hawker in Technical Topics "RADCOM", March, '82)

WARNING!!

Disposing of your old rig??

Please ensure it goes ONLY to someone licensed to use it on YOUR bands.

VHF UHF - an expanding world

Eric Jamieson VK5LP
1 Quinns Road, Forreston, SA 5233

AMATEUR BANDS BEACONS

Freq.	Call Sign	Location
50.005	H44HIR	Honiara
50.008	JA2IGY	Mie
50.098	KH6EQI	Pearl Harbour
51.022	ZL1UHF	Auckland
52.013	P29SIX	New Guinea
52.150	VK5KK	Arthurton
52.160	VK0WW	Macquarie Island
52.200	VK8VF	Darwin
52.250	ZL2VHP	Palmerston North
52.300	VK6RTV	Perth
52.320	VK6RTT	Carnarvon
52.330	VK3RGG	Geelong *
52.350	VK6RTJ	Kalgoorlie
52.370	VK7RST	Hobart
52.400	VK7RNT	Launceston
52.420	VK2WI	Sydney
52.425	VK2RGB	Gunnedah
52.435	VK3RMV	Hamilton
52.440	VK4RTL	Townsville
52.510	ZL2MHF	Mt. Climie
53.000	VK5VF	Mount Lofty
144.400	VK4RTT	Mt. Mowbullan
144.420	VK2WI	Sydney
144.430	VK3RTG	Temporary site †
144.475	VK1RTA	Canberra
144.550	VK5RSE	Mt. Gambier
144.600	VK6RTT	Carnarvon
144.800	VK5VF	Mt. Lofty
144.900	VK7RTX	Ulverstone
145.000	VK6RTV	Perth
147.400	VK2RCW	Sydney
432.410	VK6RTT	Carnarvon
432.440	VK4RBB	Brisbane
432.450	VK3RMB	Mt. Bunningyong

* Indicates the beacon is again operational.

† Indicates the beacon is again operational but from a temporary site whilst a permanent site is found

As you can see, there has been quite a pruning of the beacon list this month, with those most likely to be heard being given preference. As the September equinox approaches with the possibility of extended distance contacts, the beacon list will be added to in accordance with the usual practice.

I would appreciate someone writing to me with details of the VK3RMB 432.450 beacon listed as operating from Mt. Bunningyong. From my poor location here I cannot hear it. Is it in fact operating, and is it on 24 hours or on by request?

Incidentally, it appears the KH6EQI beacon shifts around a bit, and appears to be on 50.098 at present, this fact being confirmed by Gil VK3AUI.

THE EQUINOX AND SIX METRES

Gil VK3AUI gives a good round-up of activity from the Melbourne viewpoint and it seems that fair city has had a greater share of exotic DX than VK5, possibly due to shorter distances. Compare this with the VK5 report which follows and those of you in VK2 and VK4 sitting on plenty of information and contacts will have to look at your own log books!

MELBOURNE ACTIVITY

"3/3: Big JA opening for several hours, finishing around 1345Z. JA1, 2, 3, 4, 5, 6, 9. 6/3: 0841 to 0909Z JA1, 2, 3, 0, then JA7 at 1054Z. 7/3: 0127Z VK4ZJB. 21/3: Russian TV 49.750 at 0117Z, and again on 27/3 0035Z.

"3/4: 3D2JT heard at 0002Z to 0015Z with good signals on 50 MHz, but nothing heard on 52 MHz. 0321Z KH6IAA worked on 52.050. From 0816 to 1005Z JA2, 5, 9 and 0. H44PT at 2318Z same day (morning). 4/4: 0002Z Peter H44PT up to 40 dB over S9 most of the time and worked about every 6 metre station in Melbourne. H44HIR very strong on 50 MHz also. Backscatter very good at the same time, making VK3OT like a local in Melbourne. KG6JDX also worked. N6CT heard briefly on 50 MHz. 9/4: XE1GE heard on 50.087 5 x 9 between 2310 and 2315Z when he called and worked A35JT, no sign of latter in VK3. K6MYC heard weakly on 52.005 and not even a crossband contact the opening was so brief. 10/4: H44PT 5 x 9 on 50 MHz at 2212Z, but nothing on 52. H44HIR 599 at 2210Z. 12/4: XE1GE heard on 50.110 CW at 2310Z. FO8DR heard on 50.096 at 2311Z. A35JT heard with brief snatches of signal whilst he was into XE1GE and W5. 13/4: XE1GE heard, and copied VK3AQR on 52 MHz. 16/4: W7KMA heard 50.100 and 52.010 from 2349Z, working or attempting to work VK3AMH, VK3AQR and VK3OT, then W7KMA went on to work VK5 stations. 18/4 0015 to 0047Z W6XJ working all and sundry. Gary worked many for their first W contact. VK3AZY, VK3BDL, VK3NM and VK3XQ were amongst the first-timers. During the afternoon around 0320Z a couple of JA openings. 19/4: KH6EQI 0145Z at 539, peaking 599 around 0200Z when Channel 0 came on. Receivable through Channel 0 until 0210Z. Small JA openings around 0300Z."

Thanks for writing, Gil, nice to know the Melbourne or VK3 boys have been able to share in some of the good contacts, one advantage of the long distance contacts coming early in the morning.

With the help of David VK5KK and Bob VK5ZRO and my own log we have been able to put together the following as to what happened in VK5 in the same period covered by Gil's letter. The comparisons are interesting.

VK5 HAPPENINGS

3/4. KB7IT/KH2 at 2350Z S4 caused a bit of a ripple until it was realised the station was Guam. VK5KK worked 3D2JT, KH6IAA, H44PT, and heard T32AB on 50.110 at S2 on CW at 0015Z. 4/4: N6CT 52.025 worked 2317Z SSB 5 x 5 both ways. Also worked H44PT, KG6JDX, VS5LH and many JAs from 0100 to 0800Z. Heard H44PT, KH6HI, 3D2JT, K6MYC, K6UZK, W6XJ and WA6JRA all on 50 MHz up to S9. Also worked W6XJ on 52.050. VK3OT heard on backscatter 5/4: JA 1230Z with JA1, 2, 3, but not strong. 10/4 2304Z VK8GB; 2345Z VS5LH 52.090 5 x 3 to 5 x 9. 11/4 H44HIR 2200 to 0000Z, also H44PT. VS6BE 2250 to 0045Z beacon/keyer on 50 MHz, VS6SIX 2310 to 0020Z to S3. JA2IGY also noted A35JT 50.103 from 2305 to 2315Z 5 x 3; VS5LH 2310 to 0020Z, N6CT 2317 to 2320Z 52.010 549 both ways. (Exactly one week earlier VK5KK had worked him same time SSB.) KG6JDX also worked, many JAs. 13/4 JA1, 2, 7, 8 0458 to 0840Z. 17/4: W7KMA 0012Z 52.020 539 to 559 and then changed to 52.003 and continued with CW until fading out 0100Z. Tom's XYL WB7TOV heard 5 x 1 at 0015Z, WA7EPJ also heard. Distance 8,600 miles. W7KMA worked VK5RO, VK5ARZ, VK5KK and possibly others, and one way with Bob VK5ZRO. (I was in Adelaide spending money, so missed out!—5LP.) David VK5KK commented that it seemed strange, but while W7KMA, etc., were there nothing else was to be heard anywhere either on 50 or 52 MHz! KH6EQI 0340 to 0400Z same day. Later it opened to VK7ZIF, followed with JA1, 2, 3, 4, 0 from 1155 to 1332Z. Bob VK5ZRO was very pleased to have a couple of RTTY contacts, the first with JF3BRW for 30 minutes, 1224 to 1304Z, signals 579, and then JA2LQY, 1305 to 1332Z at 459. (Bob also reported late March contacts from 28/3 to 31/3 were confined mainly to numerous small JA openings.) 18/4: VK7 and ZL1BFQ and ZL1BHV 0300 to 0330Z. JA 0900Z to JA1, 2, 3, 4, 5 and 6. Since then the band has been somewhat quieter, with a brief JA opening on 20/4, 22/4 and 23/4.

Probably nothing to do with the 6 metre conditions, but while there was so much activity on 5/4 to 7/4 on 146 MHz, Channel 6 Mt. Gambier, Channel 7 Mt. William, and Channel 8 Mildura, repeaters were all noise free at VK5KK for long periods on all three days, peaking around 1000Z.

DOES SIX METRES EVER CLOSE?

I have received a rather interesting letter from Robert VK3XQ. Firstly, I wasn't sure how I could use it but now I do! Robert has set out for me (and you) a list of contacts on 6 metres during the whole of 1981 for places outside his own State. It is interesting to note that some contacts were made during every month of the year. VK and JA stations being the most numerous, I have just given the call area, others have the call signs. It's worth you scanning the list and remembering how many times you said the band was dead during the past 12 months.

1/1/81: P29DJ, H44PT, VK2, 4, 7. 2/1: YJ8PD, VK2, 4. 5/1. VK4, JA2. 6/1 JA3. 7/1: VK4, JA1. 8/1: VK1, 2, 4, 6, ZL, JE3. 10/1: VK4, ZL. 11/1: VK4, 8. 16/1: VK7. 22/1: VK2, 4. 1/2: VK4 8, JA1, 2, 3, 4. 3/2: VK2, 4, JA1, 2, 3. 4. 6/2: VK2 4, JA8. 8/2: VK4, JA2, 3. 9/2: VK4, JA7. 14/2. VK4. 17/2: VK7. 22/2. VK7. 25/2: JA7. 8/3 JA1, 2, 0. 15/3: JA1, 2, 3, 8, KH6JJI. 16/3: KH6IAA, KG6, JA1, 2, 3, 4, 5, 7, 9.

17/3: VK4, JA1 to 0 inclusive for 80 contacts! 19/3. XE1GE. 30/3. H44HIR. 3/4: JA7, 0. 14/4 JA2, 3, 4, 6. 15/4: JA1, 2, 3, 4, 5, 6, 9, VK1, 4, 5, H44HIR. 16/4: H44HIR. 20/4: VK1, 2, 4, 5, JA1, 2, 7, 8, 9. 21/4: AH8A, KG6JDX, P29SIX. 24/4: VS5DX. 26/4: H44PT. 30/4 JA1, 2. 19/5. VK4. 1/6: VK4. 2/6: VK2. 8/6: VK4. 10/6: VK4. 29/6: VK2, 4.

2/7: VK4. 3/7: VK4. 10/7: VK7, ZL3ADT. 1/8: VK4. 6/8 VK4. 21/9: JA1, 2, 3, 6, 9. 22/10. JA2. 23/10: VK4, JA1, 2, 3, 4, 8. 17/11: VK2, 4, 5, 7, JA2, 3, 6. 18/11: VK7. 20/11. VK2, 4, P29SIX. 22/11 VK2, 4, JA1, 2, 5, 6. 23/11 ZL4AS, JA1, 4, 7. 25/11: JA1, 2, 4, VK4. 26/11: VK4. 27/11: VK4, JA1, 2, 3. 29/11. JA1, 2, 3, 4, 6, 7. 30/11: VK2. 1/12: VK4. 2/12: VK2, 4, ZL4AS. 3/12. ZL3ADT, ZL4CN. 4/12: VK4, ZL2KT. 5/12: VK2, 4, 5, ZL. 6/12: VK2. 8/12: ZL1, 3. 9/12: VK4. 10/12 VK2, 4, 5. 13/12: VK2, 4. 20/12. VK2, 4. 22/12: VK2. 23/12. VK2, 5, ZL. 24/12: VK2, 4. 25/12. VK2, 4, 7, JA1, 2, 3, 4. 26/12: VK2, 4, 5, 6, 7, 8. 27/12: VK2, 4, 8.

May and September seemed to be the easiest months, with August close behind. Surprising the number of mid-winter openings to VK2 and VK4. On many occasions the openings to Japan seem to have been assisted by Es as VK4 was also worked on the same day, indicating the JAs were probably into VK4 anyway and were assisted further south by Es. First time I, and probably most of you, have had such a period of operating placed before you at one time. Thank you, Robert, for the effort you put into the preparation of the list.

SMIRK PARTY CONTEST

The Six-Metre International Radio Club is sponsoring the 8th Annual (Summer, US) Party from 0000Z 19/6 to 2400Z 20/6/82. Participants are required to exchange SMIRK number and State or country. No crossband contacts, multi-operators or partial contacts. Check logs or dupe sheets not required. SCORING: Count 2 points for each SMIRK contact, 1 point for non-SMIRK. Total SMIRK plus total non-SMIRK multiplied by total number of States or countries worked = claimed score.

AWARDS: Trophies for high score SMIRK in two divisions — US/Canada and Foreign. Certificates for high score in each ARRL Section and Foreign State, Province, Prefecture or Country. ENTRIES: Entries to be eligible must be submitted on the Fall, 1981, edition of the official SMIRK log. Send entries, postmarked not later than 11th July, 1982, to Spencer F. Ritchie KA2MHT/5, 5122 Sagamore, San Antonio, Texas, USA 78242. The official SMIRK Party Contest log sheets are available from David Minchin VK5KK, Arthurton, SA 5572, free to those requiring them, providing you enclose a stamped, addressed envelope for David to return the sheet. There is room for 80 SMIRK or other contacts per page.

CYCLES 18, 19, 20 AND 21

It's been a long wait but at last it has come to hand! I am talking about graphs of the solar count for those four cycles, courtesy of the Japanese CQ magazine, and Graham VK6RO who has been hunting them up for me. For months we have been missing the one covering 1958 to 1969, but at last it has been found so we can now present the full story in figures to you.

Cycle 18 starts off in January 1945 with a solar count of 30! By 15/8/45 it had risen to 55. On 1/1/46 it was 70, and on 26/1/47 was 155, when J9AAK worked KH6DD over a distance of 7,360 km. This peak was maintained through March/April that year and then slowly dropped away. On 17/10/47 J9AAO worked CE9AH over 16,800 km. Then on 21/3/48 LU9AV worked KH6PP 12,200 km, with a solar count of about 145. Then on 23/7/49 on 144 MHz W3CUM worked W0BIP over 1,280 km with a count of 120. The count continued to slowly drop away to about 50 when on 10/6/51 on 144 MHz W6ZL worked W5QNL at 2,250 km. The count continued to decline until at 10 on 14/7/53 JA1FC worked JA6BV via Es. The count was zero in April 1954!

Cycle 19 now starts with the count rising to 20 by 1/1/55, and to 80 by 1/1/56. On 22/1/56 VK4NG worked JA1AHS, then with the count up to about 120 on 24/3/56 JA6FR worked LU3EX over 19,190 km, which was to stand as a record for some time. The count continued to climb so that at 160 on 1/1/57 JA was contacting W and on 4/3/57 CX2 was worked by JA. Then with the count at 190 on 8/7/57 W6NLZ worked KH6UK on 144 MHz for the first such ocean crossing. The peak of 205 was reached during November 1957, with numerous JA to W contacts. On 28/3/58 JA6FR worked PY3BW for 19,810 km, 15/5/58 JA-ZS1, and then a slow decline in count to 150 with JA to ZS3 on 10/9/59. The count slowly dropped to be 70 on 1/1/61, 40 on 1/1/62, 30 on 1/1/63, 10 on 1/1/64, and the lowest 5 during 1964. In the period January 1963 to January 1966 there were quite a lot of contacts between VK and JA. Additionally, almost at the lowest point, 11/4/64, W6DNG worked OH1NL on 144 MHz, and on 31/7/64, right at the lowest, W1BU worked KH6UK on 420 MHz.

Cycle 20 now takes over and by 1/1/66 the count is up to 30. By 1/1/67 it is up to 70, 1/1/68 125, and reaches the peak of about 130 in November 1968. By 1/1/70 it was just under 100, and in March 1971 LU1MBJ worked JA with a count around 75. A low spot was reached at 70 in August 1971, then a slight rise to 75 in April 1972, then a slow decline to 45 on 1/1/73, 35 on 1/1/74, 30 on 1/1/75, 20 on 1/1/76, and reached the lowest point of 12 about mid-1976. In August 1975 JA6DR and W6PO had their first 144 MHz EME QSO. Cycle 20 was largely uneventful as you can see.

Cycle 21 now takes over and in August 1977 JA to KL7 on 6 metres, when the count is only about 30. Then with the count at 50 VK8GB worked JH6TEW on 144 MHz for the first such time an SSB QSO. In April 1978, with the count at 80, JA worked CE3OK. March 1979 at 125 JA to ZS6LN. The peak of 165 was reached during December 1979. On 10/4/80 JA worked all continents with the count just below the peak. On 1/1/81 the count was 120 and has continued to fall away, but there is little need for me to spell out here what has been going on in the way of contacts, particularly in the northern hemisphere. The figures for 1982 are January 125, February 123, March 121, April 119, May 117 (projected). A study of what good things were being done during the run-down of the other good cycle (19) indicates there may still be some very good contacts to be had, particularly October 1982 and April 1983. All indications from previous figures are that we can expect some improvements in 144 and 432 MHz propagation as the count goes down.

The outstanding point to come from the information in the graphs is the fact that the count rises fairly rapidly and falls away much more slowly. In other words, it takes about three years for the count to rise to its peak, it stays around that point for perhaps a year, then gradually falls away, taking about six years to reach the low point, where it stays for about a year also, and that takes care of the 11 years of the cycle. So we have had peaks in March 1947, February 1958, November 1968 and December 1979. **When next, say November 1990?**

DX-PEDITION TO GAMBIA

The C5ADL, C5AEG and C5ACG supported DXpedition by W6JKV and N6BFM to The Gambia from 7/11 to 20/11/81 was apparently a huge success. On 50 MHz they used an IC55D plus modified SB200 to an 11 element KLM 32 foot boom antenna at 65 feet. The 29 countries they worked on 50 MHz were 5B4, 8P6, 9Y4, C5, EL2, F, FM, FY7, HC, HC8, J6, JA, KG6, KH6, KP4, KV4, PJ9, PY2, SZ, VE, VP2M, VP2V, VP5, VS6, W, XE, YV, ZB2, ZD8. Not included but worked PA, EA. In addition they worked 13 countries crossband, 50 to 28 MHz, CT1, D, F, G, GU, GW3, HB9, OE, OK, OZ, PA, SM and SV. In working USA, they worked all US States except KL7 for 791 stations and 1,082 contacts! On 15/11/81 they claim to have WORKED ALL CONTINENTS (without working VK). Draw your own conclusions on the validity of this claim! The solar flux was 248 when they started the contacts, was 196 when they WAC, dropping to 156 when they finished. Congratulations are certainly in order for an outstanding effort, and only serves to show how much better the northern hemisphere has been than the southern. The above DX-pedition was reported by me in an earlier set of notes, but this further information will be more interesting. All the above comes from the Japanese CQ magazine, which is a wealth of information if you can read the Japanese language.

REGION 3 LOCATOR SYSTEM

You will recall some time ago I introduced the subject of locator systems which in effect indicate where on a world scale any particular amateur station might be located. Several systems were outlined and feedback was requested. A little interest was shown but not enough to make any real moves to adopt one or another system, with the WIA deciding not to do anything about changing the present situation.

I am now in receipt of a letter from Folke Rasvall SM5AGM, who is the VHF, UHF, SHF, DX Record Co-ordinator for Region 1,

which is headed "Region 3 has adopted Locator" and goes on to say: "The IARU Region 3 Conference was held on 2nd to 5th April, 1982, at Manila, the Philippines. The following resolution was read by Region 3 Secretary 9V1RH on telephone — 'This Conference resolved that The Human Language Code System developed by JARL be adopted within Region 3 for amateur radio purposes for transmitting the position of a station and that the proposed Region 1 Locator System be adopted for use with Region 3 when the time is appropriate, and further requests that both the system details and the above decision be conveyed to all member societies of the Union through IARU headquarters. The resolution was made by New Zealand, seconded by Japan, and carried unanimously.' (Human Language Code System means longitude-latitude given as N3452 E13942, which means 34° 52' north, 139° 42' east.)

"This was a very important step forward to a change to the new Locator in Region 1, and I guess I need not say that I am very glad for this resolution. It means that both Region 1 and Region 3 have declared that if there is a need for a locator system it should be the locator proposed at Maidenhead (modified G4ANB system = Locator). The only thing we are now waiting for is a corresponding statement by Region 2. The successful outcome of the Region 3 Conference was to a very large degree the result of active help in the first place from NZART (New Zealand) and in the second place from JARL (Japan), to whom I want to express my gratitude.

"It is obvious that the active support from a member society simplifies the adoption of a proposal quite a lot. It would therefore be very desirable if some of the Region 2 member societies could put forward a proposal corresponding to the NZART proposal. The only Region 2 society with whom I have been in correspondence is ARRL (USA). In USA there is support for both longitude-latitude (K1ZZ and others) and Locator (W3XO, WA1JXN and others). Why it seems natural for ARRL to propose both systems in parallel, especially since they complement each other. Longitude-latitude is based on points in a coordinate system and is good for giving the position of a station with high accuracy if the length of the information is of minor importance. Locator is based on alpha-numerical names of areas in a grid system and is good for collecting purposes and for giving the approximate position of a station with increasing accuracy through successive subdivision of the areas (field "JO" square "99", sub-square "DK"). Could we hope for an ARRL paper to the Region 2 Conference in 1983 proposing longitude-latitude in the first place and Locator in the second place for those who wish to use it? If adopted, this should be enough to permit a change to the new locator in Region 1 at our next conference in April, 1984.

'Finally, I want to thank you all for your help in reaching the above goal. Folke SM5AGM'

GENERAL INFORMATION

We seem to have given six metres another good bashing this time, but then most of the time that's where the activity is, and what is reported here is only touching the subject; if all those who are actively engaged in working DX on that band were to contact me in any one month then no doubt a report could be put together perhaps rivalling that produced by SM/RK, which has for years been an outstanding assessment of the position on six metres throughout the world.

SCRAMBLE, FOX HUNT

I note in a letter from Gil VK3AUI that in Melbourne a 2 metre scramble is held every two weeks on Sunday nights, and a 2 metre fox hunt on the third Friday of each month. Both these activities have been going for some time, with the success of the scrambles being assured by the work being put into them by Rob VK3XQ.

432 AND 1296 ACTIVITY

There are also keen groups operating on 432 and 1296 MHz with contacts extending into the Mt. Gambier and Millicent regions of VK5. A group in VK5 are also actively engaged in 432 MHz activity each night with Bob VK5ZRO, David VK5KK, Don VK5ZRG being the mainstays. David VK5AGO has just moved into a new house in a super-dooper high spot at Cherry Gardens in the Adelaide hills and will be a force to be reckoned with in the future; his 432 MHz signals are S9+ here at 5LP and he's not properly set up yet! Another David VK5CK is gradually getting together his four 16LB yagis for 432 MHz. I noted the other day they were already mounted on the mast so that should be another strong signal from the Adelaide hills before long.

CONVENTION

Don't forget the South East Radio Group Convention over the Queen's birthday holiday weekend, 12-13th June, to be held in the Mount Gambier A. and H. Society Hall, Pick Street, Mount Gambier. A change from the usual format shows some events occurring on the Saturday afternoon, so it may pay you to get there a bit earlier than usual.

JAPAN ON TWO METRES

John VK6GU at Wyndham reports having worked two stations in Japan on the 23rd of April.

John VK6GU worked Yuki JH4JPO at 1052Z and then worked JH4XTN at 1103Z. Reports of 559 were exchanged. The characteristic flutter of transequatorial signals was observed. The distances involved were 3,424 miles and 3,419 miles as calculated by Graham VK8GB.

John has also observed paging signals from Japan on 146.81 MHz.

Steve VK4ZSH reports that, whilst portable at McKinlay, 115 km south-east from Mt. Isa, he heard paging signals from Japan on the 27th April from 1041Z to 1115Z. The signals were on 146.76 MHz from Mito City, 100 km north-east of Tokyo, and from Sendai City on 146.78 MHz and 146.810 MHz. These localities were confirmed by JA2DDN and JA1RJU, who had a frequency list of the paging locations.

Steve also reports hearing Japanese signals on 2 metres whilst in VK8, 600 km south of Darwin.

THOUGHTFUL THANKS

Finally, I received a very nice letter from Philip VK3YAZ expressing his appreciation of the VHF/UHF notes. Whilst I never seek such letters, they are nice when they come and over the years quite a number have appeared on my desk. Philip also enclosed a number of very useful sayings which can be used for the thought of the month, and for this I say many thanks. They are obviously read and digested by many as they are often referred to in letters, over the air and personally.

I am closing the notes this month with two thoughts from those submitted by Philip and I hope you like them. The first: "Politics is the art of making yourself popular with the people by giving them grants out of their own money." The second: "You know you're getting old when your knees buckle and your belt won't." Remember: Don't turn off your six metre gear in the winter, there are often good contacts to be made.

73. The Voice in the Hills. ■

COMMERCIAL KINKS

Ron Fisher VK3OM
3 Fairview Ave., Glen Waverley 3150

THE IC-2A — A WARNING

One important function was unfortunately not checked when we reviewed the IC-2 hand-held transceiver in the September 1980 issue of Amateur Radio. This was the charging rate of the nicad charger supplied with the unit. It was recently brought to my notice that this was in fact double what it should be. The standard battery pack supplied with the IC-2 is of 250 Ma hour capacity and under normal conditions should be charged at 25 Ma for something over ten hours. However, tests carried out with Reg VK3CCE show that in fact the normal charger supplies just over 50 Ma. The cure is simple, connect a 100 ohm one watt resistor in either lead from the charger to the plug that connects to the battery pack. While looking at the charger and battery pack, it was also discovered that the connector supplied is the wrong size. It is both too long and has the wrong internal size to fit the centre pin on the battery pack socket. If you are having trouble with improper charging, check this carefully.

Vicom International were approached for information on actual charging rates for the IC-2A standard battery pack, and Mr. Duncan Baxter of that Company confirmed that the charging rate should in fact be 25 mA. You would therefore be advised to put the 100 ohm resistor into battery charge line, and also include a similar resistor in any leads made up to charge the IC-2A from a car battery/cigarette lighter socket. ■

AR SHOWCASE

ICOM RELEASES NEW ALL-MODE 70 CM RIG

The amateur radio business market worldwide has sharply contracted and, as a result, the major three manufacturers from Japan will each only release two or three new models over the next year.

The manufacturers are rapidly diversifying into business and marine radios and the old pastime of generating markets by introducing new equipment is well and truly over

One of the three new pieces of equipment to be released by Icom over the next 12 months is now available.

It's the model IC490A SSB/CW/FM 70 cm transceiver.

The new transceiver is modelled along the lines of its popular 2 metre cousin, the IC290A.

Whilst the IC490A is a superb mobile rig, it has all the features and options which make it also an excellent base station

The transceiver includes five memories and two VFOs for storing of simplex and duplex frequencies, a priority channel and optional tuning at 25, 5 or 1 kHz

The transceiver offers both upper and lower sidebands and all the standard features such as RIT, CW sidetone and semi-break-in, selectable AGC and a very efficient noise blanker.

Many amateurs enjoy the scan facility on 2 metres and naturally the IC490A offers this feature!

Full specifications and pricing details are obtainable from the Australian distributors, Vicom International Limited, from their Sydney or Melbourne offices or from one of their authorised dealers throughout Australia. ■

NEW "SIMPLIFIED" BOOKKEEPING SYSTEM

Tandy Electronics announce the arrival in Australia of their new "simplified" bookkeeping programme for their Model 3 TRS-80 microcomputer called "Checkwriter-80".

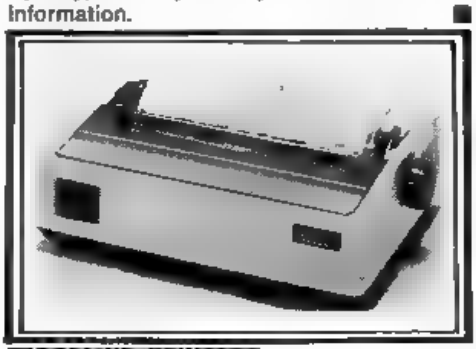
The programme requires a Line Printer and provides a cheque register plus an expense-tracking and bank reconciliation system.

Checkwriter-80 is as easy to use as filling out a cheque or deposit slip, yet gives the user all the power and accuracy of the TRS-80 Model 3 microcomputer. It is ideal for small business bookkeeping.

Checkwriter-80 handles up to nine banks (or nine different accounts for one bank), 75 payees, 30 expense categories and 2,500 transactions (cheques and deposits). Reconciled cheques are nulled from the system at the end of each period to make room for more.

Once entered into the programme, the computer prints the payees' names and addresses on each cheque automatically. The cheques can then be slipped straight into window envelopes for mailing. The computer also prints cheque registers, bank lists, payee name and address lists, and an expense list.

Tandy Corporation (Australian Branch), 280-316 Victoria Road, Rydalmere 2116, Sydney, or any Tandy store for further information. ■



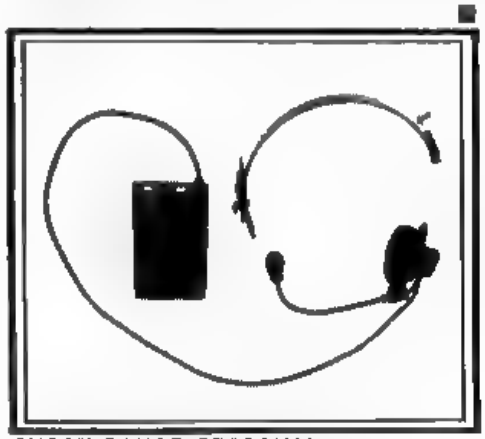
MICROLINE PRINTERS

The Microline Series 80 Printer family have arrived at COMP-SOFT. This ultra-modern equipment which is backed up by a fully "After Sales Service" is suitable from the hobbiest to a large business installation.

The Microline 80 Printer is ideal for the hobbiest, it is reliable, does 40 or 80 characters per line or condenses to 132 characters per line, upper and lower case, and graphics at 80 characters per second. Has friction and pin feed, 6 or 8 lines per inch and takes standard 2 in spool typewriter type ribbon.

Any system that has a Centronics type output can be easily connected to the Microline 80, otherwise you will need a serial interface.

Further details by calling Comp-Soft Microcomputer Services, 235 Swan Street, Richmond, Victoria 3121. Phone 428 5269. ■



SHORT RANGE PERSONAL COMMUNICATION USING NO HANDS

The recently released new personal mobile VHF FM transceiver, the "C-900 Talkman", is designed to provide two-way communication over a distance up to 1 kilometre. The Talkman is suitable for many different applications, as it is compact in size, light weight (250 grams), with a light weight headset and the transmitter is voice operated, which makes it extremely popular for operators that require their hands free whilst talking.

The Talkman has only two controls to make operation as simple as possible, with one being the volume level switch and the other the VOX sensitivity switch It is DOC approved and operates on a frequency in the 55 MHz band

For further details contact the Australian distributors: GFS Electronic Imports, 15 McKeon Road, Mitcham, Victoria 3132 ■

COMMERCIAL CHATTER

Last Icom IC22S Sold

The last model IC22S transceiver has been sold by Vicom.

The IC22S used a diode matrix to establish frequencies on a multi-channel selector switch and was the first synthesised PLL 2 metre transceiver on the market. It was one of the most popular and successful transceivers produced and just under 5,000 were sold in Australia alone.

Nearly one in every three amateurs in Australia has an IC22S as it is a highly reliable, yet budget priced transceiver. It is sold in many third world countries for commercial and government usage.

The last unit sold in Australia was purchased by the President of the North West New South Wales Amteaur Radio Group, Phil Beard VK2VBM. Phil's unit was suitably inscribed by his local Vicom dealer, Stockman and Higgins.

Icom has replaced the IC22S with a new synthesised 25 watt unit, the IC25A, which is selling exceptionally well despite the reduced interest in 2 metre gear. ■

The photograph shows Phil VK2VBM with his new transceiver. Centre is Reg VK2ATS of Stockman & Higgins. Right is Denis VK2NVN receiving a sister rig to the IC22S, the remote controllable IC22U.

U.S. Visit by T.B.C. Executive

Mr. John Marsden, general manager, T.B.C. Pty. Limited, has returned from a visit to the United States, during which he held marketing discussions with leading US manufacturers of radio and television broadcasting and communications equipment.

T.B.C. is a prominent Australian manufacturer and supplier of broadcasting equipment. Talks in the USA were centred on meeting increasing Australian requirements for special-purpose US-designed componentry, either by importing or by local manufacture.

While overseas, Mr. Marsden also attended the 1982 convention of the National Association of Broadcasters. Held this year in Dallas, Texas, the convention was attended by more than 30,000 delegates. ■

Buffy's Bull . . .

from "Gateway", Feb. 1982

Not just anyone can become an amateur radio operator, certain pre-requisites must be fulfilled for one to come into being. Firstly, the prospective amateur must be broke financially, there is no such person that can afford to buy all of the equipment necessary for the hobby; otherwise it would take half the fun away.

Secondly, prospective amateurs must have a mental kink, a kind of exhibitionism that allows them to talk loudly in public places.

Thirdly, the prospective amateur must have many time consuming commitments other than radio, this prevents him from having any fun.

Whenever these mental and environmental conditions occur there is a better than even chance that the subject may deviate from the broad path of 'normal life' for the precarious existence of an amateur radio operator.

The first signs are when they peer through the slits in the back of the telly to see how the pictures get in. Then they keep turning the family wireless from the 'Fox' to 'Short Wave 1' listening gleefully to parts of conversation like ". . . how about ya there, C'man?" appearing randomly from various corners of the globe.

The next step is the accumulation of old examination papers to prepare themselves for the ritualistic 'trial by ordeal' known to mortals as the AOCP exam. This esoteric initiation has few parallels in the history of mankind, a strange metamorphosis sets in that ultimately produces yet another licenced radio operator.

This newfound skill will enable one to swagger up to a group of total strangers in a pub and start a topical conversation on subjects like 'Standing waves' and 'Coaxial losses' with complete confidence.

The next task of the amateur is to acquire some suitable equipment and may at this point meet substantial opposition from other members of the family. It may be subtly pointed out that the money could go towards shoes for the children or a second dress for the wife, but these problems can be overcome with time and patience.

Once the equipment is purchased a minor problem remains, getting it into the house. Here a little verbal dexterity can be used to introduce it to the family. Tell of how it can be used to improve international relations, how the SWR meter improves audio quality and how your 800 channel synthesised FM VHF pocket transceiver is really just a walkie talkie. This is called the 'rationalisation' process.

The final and ultimate problem is the antenna system, there are no set rules here, though the usual method is to start small and let it get bigger and bigger until the full height of a sixty foot tower is achieved. Spread the rumour that the higher it is the less interference it causes and keep telling the neighbours that "it's only a hobby." ■

SPOTLIGHT ON SWLing

Robin L. Harwood VK7RH
5 Helen Street, Launceston, Tas. 7250

PORT STANLEY RADIO

Recent listening and monitoring of the bands has been especially interesting, since Argentina occupied the British dependency of the Falkland Islands in the South Atlantic. The radio station in Port Stanley, the capital, has been an elusive catch for many DXers throughout the world, even those on the South American continent. So when the Falklands were propelled into the world headlines, considerable attention was given to monitoring the Falklands.

RADIO NACIONAL

This tiny radio station operates on two frequencies, one on medium wave (536 kHz) and the other on the 120 metre channel of 2.370 MHz. In the pre-invasion days, it mainly carried BBC tapes and local request programmes, with frequent relays of the BBC World Service. Now it has an Argentinian call sign — "Radio Nacional, Islas Malvinas" (after the Spanish name for the Falklands) with identification in Spanish and English. I believe that some of the BBC music tapes and shows are still being heard, but they naturally do not carry the BBC World News any more, preferring instead to relay Radio Nacional programmes in Spanish from either Buenos Aires or other southern cities. Yet, curiously, they have been reported as still carrying BBC Sports Round-up.

BBC

To cover the developments for the trapped residents on the Falklands, the BBC in London has increased its programme 'Falkland Report" from a weekly to a three times weekly broadcast, utilizing its Ascension Island relay base in the mid-Atlantic. It is being heard from 2120 to 2200 UTC on 11.820 and 15.400 MHz on Sundays, Tuesdays and Thursdays. This was in addition to the quite extensive coverage in the normal BBC news and current affairs programmes. I believe that RAE, the Argentine External Service, has extended its services and has been heard in Europe at 2210 UTC in English on 11.710 MHz.

AURORA AUSTRALIS

April has also been a very interesting month as far as propagation goes. Down here in Tasmania, we have been in a fortunate position to observe several times the Aurora Australis or "Southern Lights". These displays naturally indicate severe ionospheric disturbances. It is common not to be able to hear close stations up to 1,000 km away clearly, especially on the lower frequencies, yet signals from Japan, China and the Northern Pacific come in very strongly.

These auroras also provide a reflective curtain on VHF, and it is possible to work 500 to 1,000 kms, if you point your VHF yagis into the aurora and bounce the signal off. Unfortunately, this reflection is not suited to voice communications, as the effect is similar to speaking through a hollow tube. CW does seem to get through, yet it sounds watery and has flutter.

You will observe that, prior to an Aurora display, there will be propagation to unusual locations at times not normally heard. For instance, on the 10th of April, 24 hours before the display, I was hearing Radio Amman in Jordan on 7.155 MHz at 0730 UTC in Arabic. It is certainly late to hear Mid-East signals on 40 metres, and next day there was no sign of Amman at the same time. By then the disturbance had commenced.

You will also find that conditions will be severely disturbed for up to three days or more, after these auroras appear, particularly on the higher frequencies above 6 MHz. When these "storms" abate, signals and propagation will often peak again before settling down.

HELP!! WITH ID

I have recently come across two mystery stations that I am unable to positively identify. I know that one station is in Bogota, Colombia. It was logged on Monday, 12th of April, 1982, from 1020 through to 1230 UTC in Spanish on the unusual channel of 12.268 MHz LSB. It consists of lectures in geometry, economics and European history. At 1230 clock chimes were heard, followed by an I/D mentioning Bogota, Colombia. As seasoned Latin specialists will know, their delivery is very rapid and, as I was in a portable location, I did not have any recording equipment to assist me. So if any readers could enlighten me with its call sign, I would be grateful.

The other mystery station is a presumed Clandestine. On 9.027 MHz from 0500 to 0600 UTC there is a station broadcasting in Farsi (Persian), just five kilohertz up from a Teheran channel. Location of this station is unknown, yet I seem to recall reading or hearing of the practice of Iranian clandestines sliding up to known Teheran channels. As the Teheran signal is well down compared to the Clandestine, it does indicate to me that the QTH could very well be either Cairo or in the Mediterranean. Unfortunately, when the I/Ds were given on the quarter hour, the US Strategic Air Command fires up on channel with one of their "Sky King" messages, wiping it out for several minutes. Any help you can also give me on this station will also be appreciated.

Well, that is all for this month. In future columns I will be including a list of coastal stations, so those who find difficulty in receiving WIA slow Morse sessions, due to varying reasons, can get CW experience. Until next time, all the best of DXing and 73. ■

WICEN

R. G. Henderson VK1RH
171 Kingsford Smith Drive, Melba, ACT 2615

THREAT ANALYSIS OR DISASTER PLANNING

Continuing on the theme of threat analysis as applied to counter disaster planning, I recently came across a report of proceedings from a Regional Disaster Preparedness Seminar sponsored by NDO from 15 to 28 March, 1981, at Mt. Macedon, Victoria. Whilst the seminar considered disaster analysis for many countries in the South East Asian region, the Australian findings are of direct interest to us. The analysis was presented as a table, reproduced below

ANALYSIS OF THREATS — AUSTRALIA

Likelihood of Occurrence \ Level of Severity	Major	Moderate	Minor
HIGH	Erosion, Flood (seasonal area) Drought, Cyclone, Wildfire Severe local storms (incl. hail)	Floods (flash)	
MEDIUM		Plagues	Landslide Temperature Extremes
LOW	Epidemic	Tornado Salinisation Tsunami Earthquakes	Frost

No significant Threats: Volcanoes.
Remarks: Climate change is also important.

When planning your involvement in countering disaster, and more particularly the training leading up to it, you should examine the relevance of the table entries to your local area. Note also that some table entries also influence not only what you do but how you do it, for example, climate.

QUESTIONS

The questions you must ask are.—

What are the most likely threats?

What can WICEN do to counter them at the various levels of severity?

How does this influence training?

How does this influence equipment, frequencies used, etc.?

Finally, don't forget the support role where your WICEN group becomes the out-of-disaster-area base station to relay or feed messages into the SES/NDO system. ■

QSP

HALLEY'S COMET

Four years from now — in March 1986 — Australians again should be in the privileged position of viewing Halley's Comet as it swings past the sun and heads back into the distant reaches of space. Halley's Comet is named after famous English astronomer Edmund Halley, who observed it as its return in 1682. Armed with this information, Halley made the revolutionary prediction that the comet would again return in 1758. The comet again was observed in 1835 and 1910. Improved translations of ancient Chinese records have enabled astronomical historians to trace it back at least to 83 BC. But what, after all, IS Halley's Comet? It is a ball of ice and dust — a cosmic "dirty snowball" which (upon reaching the neighbourhood of the sun) suffers a certain amount of evaporation of the ices on its surface. The gases released swell into a huge cloud many times larger than the earth which glows due to the excitation of solar radiation — something like a huge cosmic neon sign. Pressure from the "solar wind" (a stream of charged sub-atomic particles boiling off the sun into interplanetary space) ionises some of this gas and blows it back into the tail — a stream of very tenuous gas millions of kilometres long which always points away from the sun, irrespective of the direction of the comet. Only the biggest telescopes will be able to see the comet until mid-1985, when well-equipped amateur astronomers may have their first glimpse. By November 1985 it should be visible in 7 x 50 binoculars and in early January of the following year may be just visible by eye if one knows exactly where to look. A short tail should be visible by binoculars about this time. On January 13, 1986, it will be close to Jupiter and the crescent moon in the western sky.—"Scientific Australian." ■

OSCILLOSCOPES

A newly introduced oscilloscope developed by Scopex Instruments in the UK is battery powered and needs no cathode ray tube. Instead it uses a liquid crystal display. It is small in size, of low weight, memory and low power requirement.—EEC 14/4. ■

Old-Timers Club

The first of the two 1982 VK/ZL "QSO parties" took place on 8th March (14 MHz) and, judging by comments received, the opportunity to contact other members of the Clubs was appreciated by all who took part.

However, out of a combined membership of about a thousand in RAOTC and OTC (NZ), the logs show that only 39 actually took part, 16 VK3s, 8 ZLs and 7 VKs.

Twenty-five of these submitted logs, a decrease of one on the 14 MHz party of last September. Scores in VK were down, apparently due to skip effects, but in ZL they were well up.

RESULTS

Call	Mode	QSOs	Multiplier	Total
VK4AIX	CW/SSB	25	7	875
VK4CJ	CW	21	8	840
VK5CO	SSB	26	6	780
VK3LC	CW/SSB	20	7	700
VK3PR	SSB	16	8	640
VK5RK	SSB	21	6	630
VK7RF	SSB	16	7	560
VK3VF	SSB	16	7	560
VK3KS	CW	17	6	510
VK3XB	CW	17	6	510
VK3ZC	CW	16	6	480
VK2AKE	CW/SSB	14	6	420
VK3NA	CW/SSB	14	6	420
VK2AW	SSB	11	7	385
VK3NV	SSB	13	6	325
VK3XF	CW/SSB	13	5	325
VK7BJ	SSB	13	5	325
VK7JU	SSB	11	5	275
VK3YK	CW	10	5	250
W6GTI	CW	11	4	220
ZL3BJ	CW/SSB	32	5	1280
ZL2KM	CW	22	5	550
ZL2AB	CW/SSB	28	6	840
ZL3AV	CW	22	7	770

COMMENTS

"I worked all the boys that I heard. I am a die-hard CW man, a ham over 60 years, and would like to see more of the members participate as I enjoy the parties very much."—John Stewart W6GTI.

"I greatly enjoyed contacts made with many ex-RAAF members during the contest."—Maurice Burleigh VK7JU

"Enjoyable, but disappointed no VK1 or VK6. Look forward to next one on 40."—Joe Ackerman VK4AIX.

"The score is not very large — he who hesitates has lost a contact — but I do enjoy this type of get-together". — Jim Edwards VK2AKE.

"As a new member I am very pleased to have been able to join in."—Fred Gee VK7RF

NEXT QSO PARTY

7 MHz, Monday, 9th August, 1982, 0800Z to 1100Z.

Further notification of the date will be given, but refer to AR or ARA, February 1982, for rules. ■

Interesting Number Plates

During the Hamfest in Vancouver, Washington, in May 1981, George VK3NQ, was intrigued to see hundreds of cars with "Amateur Callsigns" for number plates. The plates are easily obtained for a price of $25.00

Pictured are two plates from the family of Jo and Lee Moise, K6AYZ and K6AYU, of Artesia, California

Jo (pictured) is Secretary of the International 10-10 Club, the reason for the CQ TEN plate. ■

Photographs by VK3NQ

Technical Achievement

Pictured is Mr. Hans Ruckert VK2AOU, the joint winner of the Technical Award (see Feb. '82, p.41). Hans advises us that since his school days he has used any money earned through Amateur Radio to buy parts and equipment to improve his station, so his $50.00 will be put to good use. Congratulations, Hans.

ATTENTION to all budding journalists, come forth. You could be a winner next year. ■

Human Flies

HUMAN FLIES

During late 1981 the State Electricity Commission of Victoria installed a new 500 kV transmission line through Ringwood. The transmission lines run along the back of Dave VK3DBJ's property.

Dave spent many "a happy hour" watching the installation of the spacers as the methods used were very entertaining, as we can see from the 'photo.

The spacers are installed on a set of four wires and the installation man has a "jalopy" which consists of four wheels which fit onto the four wires and the man sits on and "pedals" himself along.

The transmission lines are too close for Dave's comfort at times as they do give him plenty of QRN. ■

Photograph by VK3DBJ

LETTERS TO THE EDITOR

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publisher.

7 Bond Street, Mt. Gambier 5290

The Editor,
Dear Sir

One sees from time to time in your magazine, and in others, warnings regarding the Trade Practices Act in respect to dubious advertising.

I would like to relate a story, if I may, regarding a series of advertisements by a well known national electronics company in the hope that others do not fall into the same trap as myself.

It started with an advertisement in Amateur Radio for November last year (the same advertisement also appeared in the popular monthly magazines about the same time) offering a "NEW" FT101ZFM and quite clearly indicating that "Now you can have the features of the renowned FT101ZD with the benefit of FM".

At first I wasn't sure about the FM, but was quite sure that I would be purchasing a SSB/FM transceiver with a digital display since a digital display was the only feature a FT101ZD had which the FT101Z didn't.

I wrote to the advertiser questioning the FM side of it, but it never occurred to me to query whether or not the transceiver had a digital display. Several weeks later I received a note written on a page from a memo pad. This note didn't answer my queries, but the advertising leaflet enclosed did confirm that the FT101ZD featured a digital display.

In the meantime, I had ordered a transceiver through the local distributor for the particular company concerned. Much to my surprise, the transceiver arrived with an analogue display only. A phone call by the distributor to Sydney brought negative results, so the matter was brought to the attention of the Department of Public and Consumer Affairs. After much negotiating between the parties concerned, the company responsible for the advertisement offered me a digital display at a slightly reduced price. Under the circumstances this was quite unacceptable.

Legal advice obtained since then indicates that, since the transceiver was purchased from the distributor and not directly from the advertiser, any attempt to recover the digital display should be in the form of a writ against the distributor not the advertiser. Since I do not consider it the fault of the distributor I am loathe to take this action.

To would-be customers of this particular national electronics company I suggest they be aware of the traps in the method of advertising used, and to distributors for this company I suggest they obtain legal clarification of their position, since it would appear that they are responsible for the description of equipment sold by them in response to the national advertising.

At the time of writing the FT101ZFM is now being advertised as having the features of the FT101Z "plus FM", which is still not correct since the FM is at the expense of the AM facility.

All one can do now, perhaps, is to throw one's hands in the air and give up!

73. Ivan Huser VK5QV ■

114 Frederick Street, Launceston, Tas. 7250

The Editor,
Dear Sir,

I have before me a copy of QST March, 1931, and on one of its pages are depicted the badges of the member countries and amateur societies of the IARU. Standing alone and of distinctive outline is the badge of the WIA. Representative of an age in which the WIA rose to its present status, this badge should be placed on the highest pinnacle, as a mark of achievement and to the dedication of the amateurs who owe their birth-right to this country and who lived and fought for it over the years. It is the symbol of the WIA fondly remembered by old-timers as the badge of their institute, and to change it is an affront to the very existence of Australian amateur radio. The fact that two badges are depicted on Amateur Radio for this month shows in some way the indecision of the governing body of the Institute and of many of its members. In this day and age it is usually changed for the sake of change or someone is too blurred in their vision as to be able to tell the difference in the various badges. I never thought I would see the day when we would fail in our birth-right as depicted in this other badge. Are we losing that singleness of purpose and becoming a disorganised rabble with no idea of direction or purpose? Are we Australian amateurs, distinctive in our own nation, or a bunch of variegated colonists clamouring for a bit of extra recognition? The confusion is quite obvious, as depicted in the supplement in Amateur Radio recently, in which the diamond takes preference on the front page, and our old-timer on the inner page, and on the application form for membership. I feel this matter needs attending to, and the sooner the better. I have been a member and officer of the WIA at various times during my 47 years as an amateur and, now close on 70 years of age, I am extremely disappointed at the adoption of another symbol, when our old badge has served so many.

(Signed) Leslie Arnold VK7AM. ■

4 Parkes Street, Oak Flats, NSW 2527

The Editor,
Dear Sir,

Just a passing thought, while on air the other night talking to another gentlemen the subject of upgrading was brought up and I was thinking what a good idea if Amateur Radio could publish, when a person upgrades, their old and new call signs. This would eliminate the wondering that, when a CQ call is heard. Have I made contact with this station previously??? One's filing card system and call book could be amended until a new book is acquired when published.

Yours faithfully,
John Pratley VK2VWT.

EDITOR'S NOTE: Two problems arise: (a) on many occasions DOC lists take time to arrive, and (b) the turnover nowadays is considerable and the lists could be very lengthy following each set of exams. This would mean extra space in AR either by dropping other content or extra costs for larger issues. ■

The Editor, 204 Myers Street, Geelong 3220
Dear Sir,

In AR April 1982 you printed an article on great circle maps (page 16).

This appeared to be very popular by the large amount of letters and on air contacts received. However many people had trouble with lines 290 A5 = SQR(1 — (A4**2)) and 380 H2 = SQR(1 — (H1**2))

Some computers do not accept "**" as a "rise to the power of" command, so this may be replaced by a "^" sign.

This will solve most problems and I hope you can print this soon to the benefit of your readers.

73 Keith Vriens VK3AFI. ■

The Editor,
Dear Sir,

I am currently doing some research into the origins of the WIA emblem, and would be very grateful for any information that your readers might have. Also there seem to be several variations in design (position of the wings, etc.) and copies of these designs would also be appreciated.

If enough material is forthcoming it will be published in the form of an article in AR.

Jennifer Warrington VK5ANW (QTHR). ■

3 Corkill Street, Freshwater 4872 Qld

The Editor,
Dear Sir,

RE PHONE PATCHING

At the present time there are certain amateurs and commercial interests who are advocating the use of telephone patching on the amateur bands in this country.

These people have plenty of points for the introduction of phone patching and are carrying out a publicity campaign for its introduction.

However, they completely ignore the points against it, as well as the opinions of other amateurs.

The following are points against phone patching:

1. The reasons for and the manner in which it is being "pushed" are not in the best interests of amateur radio.
2. It has very little, if anything, to do with amateur radio.
3. It is impractical on today's crowded bands, since clear channels are required.
4. It is unnecessary since adequate and relatively inexpensive telephone channels are available to the public, both locally and internationally.
5. Its use could be in breach of third party regulations when used internationally to certain areas.
6. The operator of a station concerned would have little control over what was said such as obscene language, contentious or illegal subject matter (other than to switch off) thus placing his licence in jeopardy.
7. Phone patching on the American bands has, in the past, caused considerable friction and unpleasantness until it was relegated to certain frequencies such as MARS.
8. There is more than enough interference, "DX rackets", intruders pirates and other "garbage" on the bands without introducing another unnecessary source of contention.
9. The WIA should seek the opinion of all amateurs and not be swayed by a few "hobbyists" whose only concern is to "line their pockets".

Your sincerely,
Ted Gabriel VK4YG. ■

Officers' Mess,
RAAF, Point Cook, Vic. 3029

The Editor,
Dear Sir

The April issue stirred me to comment. Firstly, we must publicise our hobby in a simple positive manner since most Australians only get the impression that amateurs either cause interference or talk to people in war zones. (The Falkland incident was positive press.) Most people will not meet an amateur in their lifetime, so when we get publicity or meet people our message must be simple and graphic. Re-read Harry's VK8WZ article, page 37, and have a two minute "patter" giving the basics and an anecdote (or show them the IC-2A).

Secondly, and continuing, re-read the EMC notes page 38. You'll see that if we take a narrow view either technically or in personal considerations we can waste our valuable time very easily. We must realise that narrow-mindedness can be two-way, and education or PR will help reduce the ignorance people have of amateur radio. Begin at home. Does your family really know what you are on about? Or the neighbours?

How about a "travelling show"? Sam VK2BVS showed the way and different groups are always exhibiting at shopping centres every Saturday. It doesn't take much battery power to get 2m FM going for a morning. Take a world call sign map and a clearly lettered simple sign. How about a topographic map to show them where you're talking

to. And be sure to explain the difference between CB and US! You and your mate, not just your club.

73. Peter R. Ellis VK2KEP/P3 RNARS 1528. ■

Robert Gerard Felicia,
Victoria Street, Port Mathlun,
Rodriguea Island, Indian Ocean.

The Editor,
Dear Sir,

I am interested in being a radio amateur. I meet lots of Australia radio amateurs on their yachts passing my island.

Here, where I live, there isn't any local institute, so I must be self-taught. I hope you have heard about my island, which is a small point on the world map. I so want to introduce the world to my island.

I am going to ask you for some help. I would be very grateful to you if you could let me have a Morse key and some books about the easy way to learn Morse, and some technical books. Thanking you for your co-operation.

Could you please pass this on to Australian radio amateurs?

I remain,

Yours faithfully,

R. G. Felicia. ■

EDITOR'S NOTE Anyone wishing to contact Robert may write to the above address

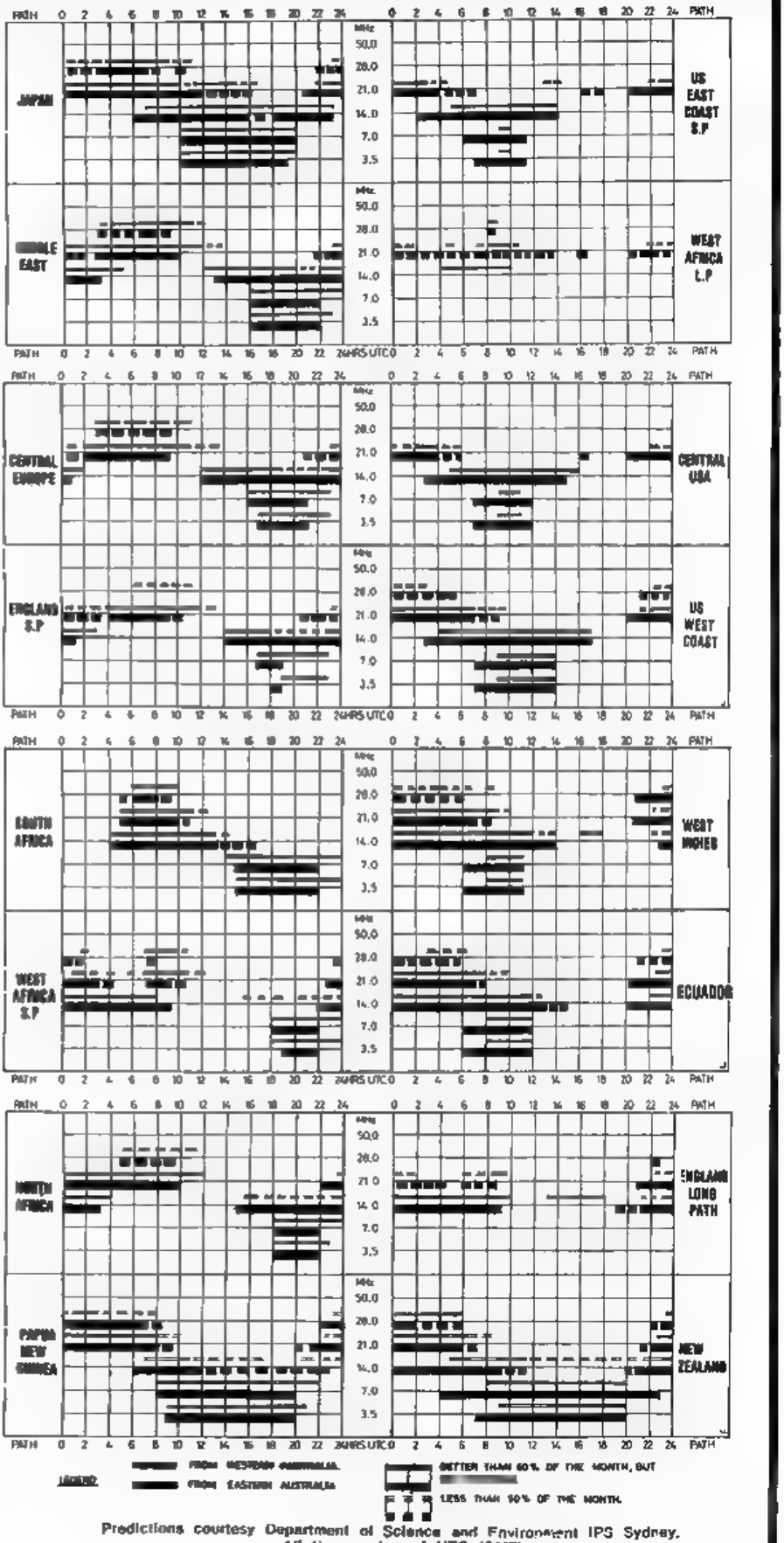
QSP

HAM FAIR 1982

The JARL announce that Ham Fair '82 will be held in the New Hall of the Tokyo International Export Center from 20th to 22nd August 1982, inclusive. 1982 is also the 30th anniversary of re-opening of amateur radio in post-war Japan. Also the Japanese amateur service, from February 1982, has been permitted the use of repeaters. ■

IONOSPHERIC PREDICTIONS

Len Poynter
VK3BYE



Predictions courtesy Department of Science and Environment IPS Sydney.
All times universal UTC (GMT)

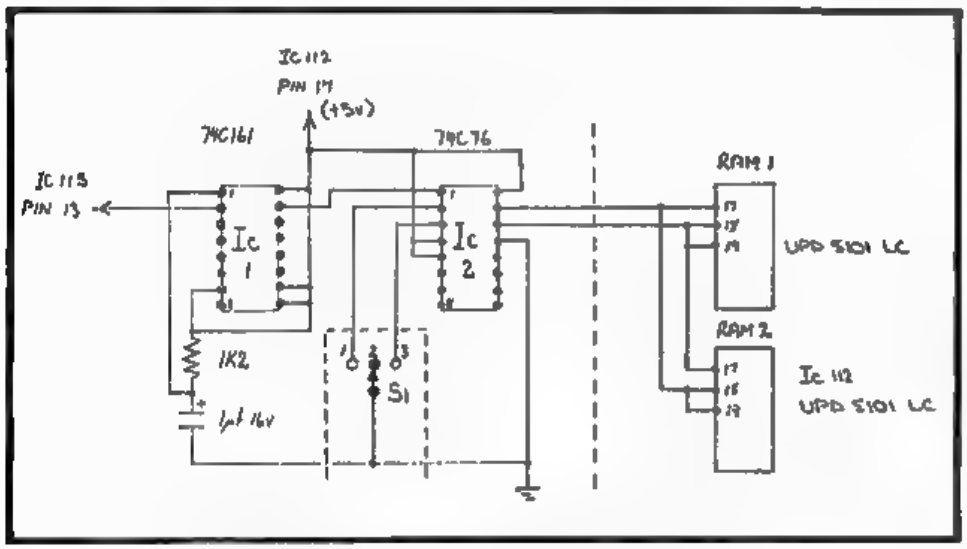
SERVICE BULLETIN
or do your own repairs??

• Modification to Increase Memory Capacity

This modification will increase the memory capacity of the SX200N by installing a second 16 channel memory IC,, with control circuitry to access either memory for programming or recalling frequencies and to enable a 32 channel scan mode, or two separate 16 channel scan modes.

This information has been kindly supplied by GFS Electronic Imports, 15 McKeon Road, Mitcham 3132.

RAM 1 mounted on RAM 2 and their corresponding pins soldered together, i.e. pin 1 to pin 1 etc., except for pins 17, 18 and 19. Desolder pins 17, 18 and 19 IC112 from main board and wire as per diagram.



S1 1. RAM 2 ONLY (16 channel scan A, Prog/Recall RAM 2).
2. RAM 1 & 2 (32 channel scan A).
3. RAM 1 ONLY (16 channel scan A, Prog/Recall RAM 1).

NOTE: SCAN B will only function correctly when either RAM 1 or RAM 2 is held on permanently, i.e. S1-1 or S1-3.

Some Handy Hints and Immutable Laws for the Amateur Antenna Builder

Never climb a tree you can't get down if the ladder vanishes.

Never assume an RF path is cold unless you have checked it — with someone else's finger

No matter how much wire appears to be on the spool, it is always at least 3" short.

No matter how many trees you have, they are not in the right places . . .

Or if they are in the right places they won't be big enough for another 50 years

ANYTHING will work as an antenna to some extent, but NOTHING works as well as it should.

The impedance of any new antenna is always outside the range of your ATU.

YOU can change ionospheric propagation paths — if you build a V-Beam or Rhombic for a particular path, the path will move at least 20° by the time you fire up.

Breaking strain of a wire is easily determined — it is always 10 kg less than the minimum force required to get it up in the air.

By reference to handbooks you can always prove that no useful antenna can be made from the materials at hand.

— VK2DXP
from "Propagator", Feb. '82

SILENT KEYS

It is with deep regret that we record the passing of —

Mr. T. CONNOR	VK7CT
Mr. I. A. NICHOLS	VK7ZZ
Mr. C. SHORT	VK4CM
Mr. A. W. WHITE	VK3AHW
Mr. G. W. L. WOOKEY	VK3YJ, VK3AYJ

OBITUARIES

ALAN WHITE **VK3AHW, ex VK2AWW**

Alan White VK3AHW, ex VK2AWW, passed away on the 7th of January in the Dandenong Hospital after a long illness. He was in the prime of life at 55 years of age. He leaves a grown up family and his second op., his wife Bev. To them we extend our sincere sympathy.

I well remember Allan as a young schoolboy from the Coburg High School calling in to my shack way back in 1948. He was a very keen lad and showered many questions on me about amateur radio.

He followed a career in electronics, obtaining his AOCP in 1946. Alan spent 11 years in the Navy as a CPO in radio and radar work. He was a member of the Navy Radio Club, a full member of the Television and Electronic Institute of Australia and an associate member of the Radio Engineers. In his keenness for radio he also held a broadcast stations operator's certificate of proficiency. Electronics was his life.

Snow Campbell VK3MR. ■

GEOFF WOOKEY **VK3YJ**

It is with deep regret we mourn the passing of Geoff VK3YJ on 19th April, 1982.

I first met Geoff when we were lads at the WIA classes and we took out our licences at the same time, almost to the day.

For years we roamed together, confided in each other and for a time I helped Geoff operate on the BC bands. But then I married and moved north to Sydney, and the only contact we had was the occasional Christmas card.

About 12 years ago I had a shack full of army disposal gear and a valve receiver and transmitter, and I asked Geoff if he might be interested in getting back into radio. His first reply was "No", but later he changed his ideas and went "full ahead", suggesting I do likewise.

We started out like "new chums" on 2 metres and then we graduated to the HF bands.

Geoff was a skilled electrical instrument maker and was on crutches from his early teens, but he did not allow this to limit his activities too much.

Ron Easterbrook VK3RM ■

HAMADS

PLEASE NOTE: If you are advertising items FOR SALE and WANTED, please write on separate sheets, including ALL details, e.g. Name, Address, or both. Please write copy for your Hamad as clearly as possible, preferably typed.

- Eight lines free to all WIA members. $9 per 10 words minimum for non-members.
- Copy in typescript please or in block letters to P.O. Box 150, Toorak, Vic. 3142.
- Repeats may be charged at full rates.
- Closing date: 1st day of the month preceding publication. Cancellations received after about 12th of the month cannot be processed.
- QTHR means address is correct as set out in the WIA current Call Book.

TRADE HAMADS

Conditions for commercial advertising are as follows: The rate is $10 for 4 lines, plus $2 per line (or part thereof) minimum charge $10 pre-payable. Copy is required by the first day of the month preceding publication.

Ordinary Hamads submitted from members who are deemed to be in the general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being resold for merchandising purposes.

Amidon Ferromagnetic Cores: Large range for all receiver and transmitter applications. For data and price list send 105 x 220 SASE to: R.J. & U.S. Imports, Box 157, Moridale, NSW 2223. (No enquiries at office: 11 Macken St., Oakley, 2223).

CB Radios $69; walkie talkies, short wave radios, military, outback, business, amateur, marine, repairs, RTTY Siemens 100A printer $120; base mic., $45; ultrasonic alarm, $35; all ham bands on a single 6 ft. whip, 1.8 to 30 MHz, for base or mobile, $300; aerials, installation, demonstrations, 40 ch. CB conversions, accessories, new rigs weekly. Bridge Disposals, 12 Old Town Plaza, opp. Bankstown Railway Station, NSW. Mail order service and all enquiries to 2 Griffith Avenue, Roseville 2069, or phone Sam VK2BVS, 7 p.m. to 9 p.m. only, on (02) 407 1066.

ADVERTISERS' INDEX

WANTED

12V DC Relay, 4000V. VK2QT, QTHR. Ph. (048) 71 1018.

Quotes to remove old beam from 50 ft. tower and replace with new beam. Ph. Hepburn (03) 596 2414 after 6 p.m.

For Spare Parts: Icom DV-21 digital VFO, any cond. Roy VK3AOH, QTHR.

Crystals, to suit Pye Ranger carphone, ch. 5 rptr., 4.0625 Mc xmit, 13.1292 Mc rcve., HC6V holder. Peter VK2XAN. Ph. (042) 29 5047.

Kenwood AT120 Tuner, top price paid for good cond., freight paid. VK4CIX, Ph. (07) 355 0080.

Can any amateur please supply me with a circuit diagram of a grid dip oscillator? Q MAX. Model GDO-1A, made by Electronics Ltd., London, will pay expenses, VK5CH, QTHR.

Receiver, type AN/APR-4, complete with all coil units, APS4 radar scanner, radar type H2S equipment, TCS genemotor power supplies, antenne tuner and speaker/controller, valves type 1B24, 1616, equipment type GEE, Rebecca, Eureca, APN70, TPS3, AVQ10, MN26, 360 degree antenna position dials, other aircraft radar components, particularly from Vampire, Gannet and Sea Vemon, equipment required for static display. VK3AQB. Ph. (03) 337 4902.

WANTED KNOWN

SWLs: Australia's national "Southern Cross DX Club" has the latest news from the SW, MW and amateur bands in our monthly "DX POST". Write for a sample magazine and details of membership to G. Williams, PO Box 64, Campbelltown, SA 5074. Return postage would be appreciated. Hope to hear from YOU soon.

FOR SALE

Kenwood TS120S, incl. 27 MHz VFO 120, with manuals, $525; DSI frequency counter, 3350 model, complete, $100. VK3VON, PO Box 68, Ballarat, Vic. 3350.

Kenwood TR2400 SMC-24 spkr., mic., batt. charge, Kenwood base stand ST-1 and dynamic mic. MC-30S, instruction manual, as new, in cartons, $400. VK3BAV, QTHR. Ph. 598 8665. Sale due to illness.

Scanner, JIL SX-200.26-514 MHz, 16 memories, new, still under warranty, instruction book, etc., forced sale, genuine, Newcastle area. VK2AXZ, QTHR. Ph. (049) 54 0893.

Kenwood TS520S mod. for novice power, MC50 mic., AT180 tuner, immac. cond., $700. VK2VQK, QTHR. Ph. (02) 607 7845 evenings, weekends.

Genuine Antique Radios, crystal set, parts for restorations, old amateur radios 1933 onwards, Morse key collection, incredible HV supply, 2-3 kW, screen supply alone would run legal plus, dozens of power transformers, including 5.5 kV and some LV types, suit high power transistor rigs, transmitting gangs, disposals gear, many other items. SAE P. Nesbit, 32 The Grange, East Malvern, Vic. 3145. Ph. (03) 211 8879 AH.

Colour Camera, National WV3300, C mount with 6 : 1 zoom and fixed 25 mm lens, 100 LUX min. illum., electronic viewfinder, resolution 250 lines, SN 45 dB at normal illumin., uses 1 in. striped vidicon, separate CCU with balance and lighting controls, excel. ATV camera with 12V AC adaptor supplied, or use direct with recorder having 10 pin video connector, near new cond., $1,100. VK3ZZZ, 3 Bullanoo Court, Greensborough. Ph. (03) 434 3510.

Kenwood TS180S, 16 months old, also TS180 speaker, $675. Ph. (07) 284 7739.

FT-7B Solid State Txcvr., many extras, incl. YC-7B digital dial, $535; VFO-820 external VFO, compatible with many rigs apart from TS-520, as new, $90; 13.8V 20A continuous, fully regulated PSU, metered, $95; Kenwood R-820 top of the line receiver, originally cost more than a TS-520, excel. cond., $550; Swan WM-1500 in line wattmeter, as new, $50. VK3ARZ, QTHR. Ph. (03) 584 9512.

Advance Audio Signal Generator, model H1E, 15 Hz-50 kHz, sine/square wave, 0.2 mV to 22V output, $40; Teletype No. 14 typing reperforator, 50 baud with 110V AC synchronous motor, working, and orig. Teletype parts, adjustments and operation manuals and two tapes, $25; Teletype No. 14TD reader, 110V, with adjustments manual, works need adjust., $5. VK2ZET, QTHR. Ph. (02) 85 4640 AH.

Johnson Viking 352D, converted to 10m, 46 channel, plus clar. SSB, incl. helical whip, little use, $150. VK3ACN, QTHR. Ph. (054) 42 1288 Bus., (054) 43 7692 AH.

Shack Sale: Yaesu FT290R portable all mode Txcvr, carry case, mobile mounting, nicads, charger, 40W linear, 5/8 vertical, as new, $600, ONO; 2 off CROs, RF and AF signal gens., valve transistor and CRT tester, Mullard, complete, AMR 101 communications receiver, xtal locked, power supplies, etc., $600 lot, ONO. Peter VK2XAN. Ph. (042) 29 5047.

Superboard II Microcomputer, 8k-basic, 8k-ram, easy conversion to send/receive RTTY and Morse, easy conversion to MODEM, with stacks of manuals, books, mods., notes and software, can hook into "Source" type mainframes, $280, ONO. Must sell. Ph. (02) 939 7141 AH.

Yaesu FT101E, brand new, complete with mike, handbook, AC-DC cables, fitted with 11m, covers 160-10m with RF speech processor, $600, ONO. VK2AOV, QTHR. Ph. (060)25 4066 Bus., (060) 21 4811 AH.

Micro-module 432-28 MHz Transverter, still under warranty, recently checked by M. M. Birmingham, $175. Frank VK2ZI. Ph. (060) 6228.

Beam Antenna, Hygain, TH3 Mark 3 tri-band HF beam, covers 20-15-10m, with instruction book, $235 cash. Ph. (03) 465 2991.

National Panasonic RF8000, 12 mths. old, v.g.c., $1,600, ONO; Realistic FM scanning Rx. PRD2001, v.g.c., $200, ONO; CB-Wasp 18 ch. AM, with mic., $50. Please apply in writing only. QTH: S. Nickel, 11 St. Andrews Avenue, Birkdale 4159.

FTDX 401B, with FV401, separate VFO, match. spkr. and antenna, 14 AVQ, with hand mike, the lot package deal, $600. Contact VK2CXN. Ph. (049) 61 1582.

FTDX 400 Yaesu Txcvr, mint cond., with match. spkr., fan and noise limiter, spare set tubes and manual, $450, ONO. VK2QT, QTHR. Ph. (048) 71 1018.

Hygain V converted 10m VFO ANY, 400 kHz in 2 x 200 kHz steps, USB & AM, RIT, 6 kHz, presently covers 28.200 to 28.600, vernier dial for easy tuning, only $100; Trio 9R-59DS comms Rcvr, 0-30 MHz, looks and works OK, $100. VK4KLV, QTHR. Ph. (07) 208 8709.

Antenna Gear: KW E-Zee Match, 80-10m, 400 PEP, bal./unbal. output, as new, $80; Hygain RF550A wattmeter, 400/4000 watts, fwd./rev. power, with 6 pos. coax switch, as new, $50; 18 AVT antenna, 80m top coil o/c., OK 40-10m, $50; University MVA-6 VTVM with RF and HV probes, $15. VK2AMT, QTHR. Ph. (02) 451 4902.

Galaxy V HF Txcvr., power supply, manual, diagrams, $260; Heathkit electronic Morse keyer, $30; antenna, 5 element duo band beam for 10 and 15m bands, $130; the lot for $400. VK5ATU/NTU, QTHR. Ph. (08) 258 7020.

Kenwood 130S, brand new, never used, $830, or reasonable offer. Barry VK4BIK. Ph. (07) 396 2279.

FT101E, AC-DC, 160-10m, complete, first class order, plus three helicals 80, 40, 20m, $650. PO Box 339, Maroochydore 4558, Qld. Ph. (071) 43 5853.

Kenwood TS520S, mic. and manual, just been retuned, new finals, v.g.c., $475; Yaesu FT107M/Dms., sanning base mic., built-in supply, under warranty, manual, $970; AT200 tuner, $130; all gear in new cond., owner going overseas. David VK2PKW. Ph. (02) 807 5813.

Collins 75S-3 Rx, with noise blanker, Collins 32S-1 trans., with 516F2 power supply, one owner, top cond., reasonable price. Gene VK4AJ, QTHR. Ph. (076) 38 1113.

DG1 Digital Readout Kit, for TS820, unused, $130; quartz 16 2m FM tnscvr, $160; ASR-33 teletype ASCII printer, with all manuals and interface for TRS-80/systems 80 computer, unit has paper tape reader and punch, $200; TS180S tnscvr, with DFC 180, CW filter installed, $850. Ph. (02) 981 4762.

C-42 ex Army Txcvr, FM 10W O/P, tunable 36-60 MHz, with PSU, harness, mic., headphones and ATU, $100. Steven VK2YVY. Ph. (02) 982 1071.

Yaesu FT227RB 2m FM 800 chan. txcvr., in as new cond., with handbook, cables, mobile brackets, etc., complete with workshop manual, $240. Geoff, VK3DGV, QTHR. Ph. (03) 560 3773.

FT200 Trnscvr., excel. cond., no mods., incl. power supply, mic., manual, spare finals, $340. Max VK2GE. Ph. (043) 92 4900.

Kenwood TS180S, DFC, dual SSB filters, CW filter, WARC bands, etc., full spec. on request, manuals, orig. packing, $825 or offer. VK3UJ, QTHR. Ph. (03) 87 5832.

Yaesu FT-208R, 2m hand-held with leather case and nicad charger, YM 24A speaker, mic., features full scanning from 144-148 in 10 or 5 kc steps, 10 memories, priority scanning or work split freq., 6 mths. old, excel. working order, urgent sale. Offers to David. Ph. (03) 728 7248 AH.

Deceased Estate: All items listed in first class cond. Txcvrs, C-430 10W 70 cm, TS820S with ext. VFO, FTDX-570, TS700A, type 3, mk. 2, with mod. and spares, SWR meter, Vicom VC-2, VOX-3 unit, VHF RF amp. type 10-40BL, MC-22-S speech processor, mics. Foster, Telaco, Astatic, LP fillers (52 ohm), tape recorder, mains adjusting transformer, Hills telescopic mast, spare valves, coaxial cables, etc., Enquiries VK3EM, Ph. 576 7745, or VK3KF, Ph. 596 1633, or QTHR.

FTDX400/FRDX400 HF All-mode Tx/Rx, 10-160m, 260W SSB, 150W CW, cross-mode, cross-band or transceive operation, narrow CW filter, VOX, CW break-in, orig. mic. and manual, 240V AC, ideal base station, $250, ONO. John VK3ATM, QTHR. Ph. (03) 459 1151 AH.

Yaesu FT101B HF Txcvr, excel. cond., from the estate of late John VK5JQ, $500. Contact Dave Adlam VK5QL, QTHR. Ph. (08) 263 2811.

Linear Amp. for 6m, power output 100W CW, drive power 10W, requires 13.8V DC, $170; Yaesu FT2FB 2m FM rig, 10W RF output, $120. Nev VK4ZNC, QTHR. Ph. (07) 225 7207 Bus., (07) 205 2121 AH.

IC202 and mic., case and manual, 3W PEP, 3W CW, beacon crystal, v.g.c., $175. VK3DGS. Ph. (059) 68 1327.

FRG-7 Rx and 3 kHz filter, good cond., $200. Allan Myers. Ph. (03) 337 0547.

Shack Clearance: IC701 with IC701 power supply, IC RM3 remote control, $900, Diawa DC7001 controller, DR 7600 heavy duty rotator, $200; Hygain TH3 JNR, $130; Hygain 18 AVT WB, $50; KW 107 supermatch with dummy load, $150; Heathkit SB 601 scope, needs a little work, $50. VK2DEN, QTHR. Ph. (02) 609 1897 AH.

Kenwood TS520S 160-10m Trnvr, virtually unused and absolutely immaculate, with MC35S, mic., manual, etc., in orig. packing, can arrange delivery anywhere, $475, offers considered. Hans VK5YX, QTHR. Ph. (08) 271 5350.

Teleprinter, Siemens mod. 100, complete with tape punch and reader, excel. cond., 50 bwd, 240V motor, $285. Ph. (03) 337 4902.

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PLUS MONITOR for a communications computer

$ 1,099 INCLUDING MONITOR

RECEIVE ONLY $ 489.00

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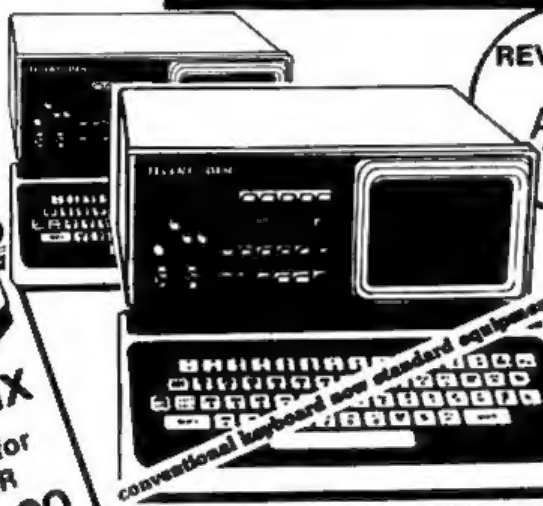

REVIEWED In ARA Vol 4 No.6

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- ★ AM/SSB RECEPTION
- ★ DIGITAL FREQUENCY COUNTER
- ★ PORTABLE/MAINS POWER
- ★ COVERS MOST AMATEUR FREQUENCIES/PUBLIC UTILITIES

SLASHED PRICE $ 379

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416 LOGAN RD.(Pacific Hwy.)
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CW ELECTRONICS

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TELEREADER	receive/trans	$ 1,099	
TELEREADER	receive only	$ 489	
PRINTER		$ 899	
MARC		$ 379	
	Freight	$ 10	$ 10
	TOTAL		

Please charge my BANKCARD No. ☐☐☐ ☐☐ ☐☐☐ ☐☐☐☐☐☐

Name..... Tel(w/h).....

Address.....

..... Postcode.....

AMATEURS read this, avoid an expensive mistake

Dear Amateur,

Consider these two recent reports of amateurs who purchased Yaesu equipment from 'backyard' importers. both these cases were told by the purchasers to our store staff in trying to get some help.

Case History No. 1:

Mr X from Adelaide bought a transceiver by mail order. After waiting some time for delivery, the unit arrived but shortly after the digital display failed. Mr X rang the supplier to be told the repair would take 6 to 8 weeks, and he would have to pay freight charges both ways. Mr X ended up having the unit repaired in Adelaide at his own cost.

Case History No. 2

Mr Y from Sydney bought a 'new' transceiver from the same source. On opening the carton, Mr Y strongly suspected the unit was not new, but had been 'refurbished'. It failed to operate at all - the PA stage was inoperative. Mr Y rang the supplier to be told that parts were unavailable and the repair would take at least three months. As it was supposed to be a brand new unit, Mr Y asked for a replacement. This was refused.

Other problems:

We have often heard of transceivers supplied without instruction manuals, or with Japanese language instruction manuals ... Obviously these units were intended for the Japanese domestic market, and never intended to be exported. The warranty is not valid in Australia on these units.

Many 'backyard' importers do not have any service facilities whatsoever - let alone spare parts. They are not authorised by Yaesu, (or usually anyone else!) and often have little expertise.

Is it worth the risk?

**Dick Smith is the only authorised Yaesu dealer offering full 12 month warranty!*

Dick Smith
VK2ZIP

NOW IN STOCK

SELLING IN USA FOR $2995!

THE FANTASTIC FT-ONE GENERAL COVERAGE TRANSCEIVER

Cat D-2852

Now Dick Smith and Yaesu bring you this superb general coverage transceiver with outstanding features for such a low, low price. Just look at some of the features. ★All mode -even FM*, ★All band -receives from 150kHz to 30MHz continuous, with resolution down to 10Hz. ★Transmitter includes all the WARC bands. ★All microprocessor controlled ★Runs from 100-120 or 200-240V AC or 13.5 DC, and much more! And the price?

An unbelievably low **$1795**

*FM board optional extra

HAND HELD FM The FT 208R 2.5W/.25W

The FT 208R transceiver brings a new flexibility to today's active 2M operator. An easy to read LCD display is coupled with a 4-bit microprocessor, bringing 10 memories and a scanning function. Only with Yaesu can you get these features at such an economical price. Cat D-2889

Complete with battery & charger

ONLY **$368**

NEW!

25 watt

FM 2 metre FT 230R and it's only $375

It's here! The brand new Yaesu FT 230R with features you'd pay $$$$ more for. 3W/25W output, full 144-148MHz band coverage,fully synthesised, 12V operation. Plus two VFO's, LCD readout, 10 memories, scanning, hi/lo power switch, and much, much more. Check it out now!
Cat D-2890

SUPER COMPACT!

SUPERB MOBILE/BASE FT 707 100 WATT

ONLY **$795**

What a performer packed into such a tiny package! It's a full power all HF band (including WARC) multi-mode transceiver not much bigger than the average 2 metre mobile! And you get digital display as well. LED S/power meter, push button operation etc, etc. Team it up with and FP-707 supply and you have a superb base station too! What more could you ask for?
Cat D-2869

2 metre SSB-FM-CW with scanning ALL-MODE FT 290R

only **$395**

The brilliant Yaesu FT290R. For the person who can't quite decide whether they want a portable or a mobile set. This one is both! And what's more, it's fully microprocessor controlled offering up to 10 memory channels, scanning, LCD display, high or low power operation, all modes plus full 144-148MHz band coverage. All this in a transceiver which can be operated both portable (from internal batteries and whip antenna) or mobile (ext. antenna and power sockets fitted). Complete with carry strap, scanning microphone and whip antenna. Cat D-2885.

DEMO CLOSEOUT SALE

Ex-demo and store stock, some slightly marked.

Full 12 month warranty

FT 207R	2 mtr hand held with charger SAVE $50!	(D-2888)	$235.00
PA 2	Mobile charger supply for FT 207R SAVE $10!	(D-2894)	$19.95
	SPECIAL PACKAGE - BOTH UNITS FOR $246.50!!		
FT 107M	Solid state HF transceiver (power supply built in)	(D-2863)	$850.00
FT 7B	Solid state portable HF transceiver SAVE $50!	(D-2868)	$549.00
FT 901D	Transceiver 160 - 10 mtrs (built-in power supply) SAVE OVER $70!	(D-2854)	$999.00
FT 901/902 memory	Memory unit for 901/902 series SAVE $40!	(D-2858)	$99.00
FT 901/902 DC-DC converter.	DC power supply for 901/902 series SAVE $20!	(D-2856)	$49.00
FT 720RVH	2 mtr mobile transceiver SAVE $80!!	(D-2890)	$369.95
FT 101ZD	101 digital HF transceiver with WARC bands (built-in power supply) SAVE $60!!	(D-2859)	$850.00
FT 227RB	2 mtr FM mobile with scanning SAVE $60!!	(D-2891)	$319.00
FV 707DM	Digital VFO for FT 707 SAVE OVER $30!	(D-2896)	$265.00
MMB2	Mounting bracket for FT 707 SAVE $9!	(D-2857)	$25.95
	Galbraith paddle morse key SAVE $2.55!	(D-7103)	$14.95
YM-34	Desk Mic for FT 707 SAVE $14.55!	(C-1114)	$29.95

Some stores have limited or no stock available. Ring Jim Powell at Head Office (02) 888 3200 for details on where to find these bargains.

DICK SMITH Electronics

See Page 34 for address details

DSE/A240/PA1